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ABSTRACT

This book gives teachers an understanding of speech training through specially selected exercises. The book's exercises aim to help develop clear speaking in the classroom. Methodically and perceptively used, the book will assist those concerned with the creative powers of speech as a teaching art. In Part 1, there are sections on the links between speech and child development, the speech organs, the effects of artificially produced sound on speech development, rhythm and meter, and the sound groups. In Part 2, the consonants are linked to the constellations of the zodiac and applied to classroom work. Part 3 contains: a bibliographic note from Imma von Eckhardtstein; "Introduction Motifs of the Twelve Constellations" (Fiona Tweedale); "Appendix: Live Music and Recorded Sound" (Norbert Visser); 30 references; a bibliography and a list of useful addresses and resources. (CR)

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# The Listening Ear

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## The development of speech as a creative influence in education

AUDREY E McALLEN

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# The Listening Ear and the Teacher's Voice

How to develop speech as a creative influence in education

Audrey E McAllen

HAWTHORN PRESS

*Dedication*

This book is dedicated to Mary Ellen Wilby in appreciation of the work she has done for children with special learning needs.

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Chrysippus stressed the importance of choosing people of a very special quality to look after the child; that the choice should be made according to voice quality, that the teacher's voice must be excellent so as not to influence the young initiate unfavourably, causing him to acquire in his speech and diction habits which "he would be obliged to rid himself of later."[1]

In *Quintillien In Institutio*
Oratoria 1.1.4

# *Acknowledgements*

This book is written out of a class teacher's experience with speech formation. Students of the Kindergarten Training Course at Wynstones, Gloucester, U.K. will recognise much of it as the content of the lessons I gave when teaching them for several years.

I am deeply indebted for substance and enthusiasm to the late Mrs Tamo Tymstra of the Hague Teachers' Training Course, Holland, with whom I studied just after the 1939-45 war, and to my subsequent teachers, Miss Valerie Jacobs, and Miss Dorothea Mendl, who gave freely of their time to their pupils and colleagues at Michael Hall School, Sussex. My hope is that this contribution will encourage class teachers to search for their own teacher of speech formation.

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Audrey E McAllen, Gloucester 1989.

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# PART I

# *Chapter One*
# *Speech and Child Development*

Language has always presented an insoluble problem for science and still remains one of the mysteries a purely materialistic outlook is unlikely to solve.

John Silverlight, a well-known columnist, wrote recently in *The Observer*.

"I know three things about language. One is that it is a mystery. 'The origin of language,' Dr Robert Burchfield of the Oxford English Dictionaries, has written, 'is unknown. No languageless society has ever been discovered on the earth. The faculty of speech, therefore precedes history and it is unhelpful to speculate about the circumstances of its origin.'

I know too, that language is very powerful, far more powerful than the people who use it. The French Biologist Jacques Monod has been quoted as saying that 'language may have preceded, perhaps for some time, the emergence of a central nervous system particular to man and have contributed decisively to the selection of those variants aptest to utilise all its resources."[1]

In other words *language may have created man, rather than man language.*[2]

This statement brings us to the core of the problem. Speaking and expressing the content of our thoughts in words is the attribute which differentiates the human from the animal kingdom. In early times man felt that this was something which was bestowed upon him, a gift that enabled him to be a creator. In religions and in myths the Supreme Being creates the human creature by breath and word.

The foundation of our western religious concepts unites consciousness, speech and creativity –

"And God *said*, 'Let there be light" ...Genesis I.v.3

"And the Lord God formed man of the dust of the ground and breathed into his nostrils the breath of life, and man became a living soul." ...Genesis II.v.2

In the east we have the creation of archetypal man from the activity of the toiling waters. Heated with their fervent devotion, they produce a golden egg out of which Prajapati is born.

"Desirous of offspring he went on *singing* praises and toiling. He laid the power of reproduction into his own self.
By the breath of his mouth he created the Gods: and the Gods were created on entering the sky;...
And by the downward breathing (flatulence) he created the Asuras: they were created on entering the earth."

From the Staptha Brahmana.
*The Pocket World Bible*. p35

While our outlook on the origin of language is still confused by the density of the materialistic fog, the one thing we do know is that we learn to speak through hearing other people speak. Language engenders language.

The baby learns from being talked to by his parents. A. A. Tomatis,[1] the ear, nose and throat specialist who has researched the effects of hearing and speech, has observed that the child first absorbs the mother's speech. This lays the basis for the inner qualities and life of the soul. Later, after three years, he begins to relate to the father's speech which leads him out into the surroundings and becomes the objective educational factor in his life.

The teacher has to combine both these elements in his speaking, an interweaving between inner and outer, the personal and the objective, since they play an important role in the presentation of his subject matter. The tools he uses are his own voice and the vocabulary he himself has acquired during his own upbringing. The artist has his tools, his paintbrush and colours, the potter his clay, modelling tools and glazes.

We have only our voice with which to paint the picture or describe the process. This is the tool of our art of education, through which we establish our relationship with the individual and the discipline of the class.

Speaking is so much a part of us that we are hardly aware of it. The speech organs, lips, tongue, teeth and vocal chords, receive less attention from us than our teeth do and, as instruments through which the soul life expresses itself, we do not give them the practising time we would put aside if we were learning a musical instrument. Yet our speech organs serve us a life-time without tiring, like our breathing system, of which it is a part. Do we give them the attention they deserve as the essential element in teaching?

In these days our pupils are assailed by a host of 'second hand voices'. A large number of radio and television programmes are prefilmed and recorded, so the reality of the voice is twice concealed. When videos are constantly repeated the sound deteriorates and there is also the deadening effect, on the listening/speech sense, of hearing the same thing over and over again.

We all know the difference between a live concert and a record of an item we have heard. Members of the orchestra are also well aware of the difference between playing in a concert hall and a studio. They admit that recording never draws the same forces of inspiration that they experience in live performances. Between playing and listening a subtle exchange of forces is at work, enlivening both parties. When listener and performer are separated, this enlivening power falls away, and the result may be a static hearing that doesn't 'listen'. This dulling of the listening activity is further induced when the human voice is simulated by electronic substitute devices in 'speaking games' for example where a mechanized voice gives instructions. Nowadays a child can hear "fasten your seat belt" in a mechanised human voice every time he goes in a car. Alfred Tomatis also, says that with our speech we 'touch' the person whom we are addressing.[3] How much pleasanter to be touched by the voice of someone by your side than by artificial sounds from a machine!

And what of the ear itself? This organ which receives the words and transmits them so that our consciousness can recognise and understand them?

Steiner described the interaction between the sense of hearing and the sense of speech in the early years of his spiritual scientific research. He asks, how does the perception of articulated sound come about? He describes how in music we can distinguish single tones, melody and harmony. If we are to understand how we perceive consonants and vowels, we must imagine that we hear simultaneously all the sounds of the melody and harmony, compressing to an instant what is

spread out in a time sequence. Then a second activity has to take place. Every musical tone has its sequence of overtones, which sound ever so softly as a note is played. Part of a musician's genius is his ability to produce these overtones in his playing: the more they are sounding the more the listener is absorbed into the quality of his playing. Our speech is stimulated by these overtones and apprehends them as the sounds of the language.

"What takes place in articulated sound is that the listener is subconsciously diverting his attention from the fundamental tones of the melody: these in a certain way must be disregarded and only the *harmony of the overtones* must be taken note of. What these overtones then produce is the sound 'A' or 'I'."[4]

This incredible activity is always at work in our subconscious.

The ear consist of two specific organs, one for hearing sound, one for relating to space and gravity. The cochlea is organised for sound. The semi-circular canals monitor our relation to space and gravity. This complicated structure is mature and of adult size by four and a half months in the growing foetus, and the auditory nerve is myelinized and ready to function. In a lecture on the ear, given on 9th December 1922, Steiner speaks of it as an organ that is already planned and laid out in advance. It is built up in the Spirit in the pre-earthly life of man, in communion with higher spiritual beings, with the beings of the Hierarchies.

The ear is protected in the mother's body from the forces of gravity through the embryonic fluids. Hence it preserves the plan and tendency which it received in the spiritual world in the pre-earthly life:

"Now what is there in the spiritual worlds? I have often spoken of it. The music of the spheres is a reality! No sooner do we come into the spiritual world that is beyond the world of souls, than we find ourselves in a world whose whole life altogether consists in sound and song, in melodies and harmonies and the harmonies of spoken sound. Out of these inner relationships of sound the human ear is formed. Hence we may say that in our ear we have an actual recollection of our spiritual and pre-earthly existence."[5]

Let us now turn to the more recent research of A. A. Tomatis, someone who also recognises that the human being is not solely the

total sum of his organism. Over the past forty years, Dr Tomatis' work and research with professional singers and aircraft factory workers suffering from the effects of intense noise, led him to conclude that the quality of the ear's response to sound will be reflected in the quality of the individual's voice. For example, if the person's ear is incapable of hearing the higher frequency sounds – i.e. the overtones, he will be unable to reproduce these sounds vocally. This finding, applicable to both singing and to speech, was formally recognised as the 'Tomatis Effect' by the French Academie of Science in 1957.

Tomatis' further investigations have shown how the cochlea, the spiral formation in the ear's complex, which is the part concerned with auditory perception, receives both high and low frequencies. The cochlea can be likened to a harp which has been formed into a spiral. The short strings are compressed into the centre of the spiral, the long strings are at its wider open base. These respond to the low frequency sounds, such as the general noises in our surroundings, the vacuum cleaner, train in the distance, the hum and bustle of the street and in the house; the drum and base notes in music. The tightly curled short strings at the centre of the spiral (high notes of the harp) respond to the high frequency range of the voice and of music, the violin in the concerto, the flute and trumpet, all the instruments which produce high frequency sounds. Tomatis has drawn attention to a fact, recognised in biology but so far ignored in medicine, that these low and high frequency sounds activate the brain via the acoustic nerve. Our brain is 'charged' by sound. Likewise our movement system is kept in balance by the other part of the ear which gives us a picture of our body in space, the vestibular system. (See note.)

In *Education and Dyslexia*, Tomatis speaks of the neuron complex between these two parts of the ear.

"I would like to remind the reader that man is an indivisible whole, a whole controlled by internal dynamics whose outward manifestation will be in the form of either physically or verbally expressed creativity. The ear plays a crucial role in the amazing organisation of human structure. It is as if the acoustic nerve, taken in its cochlear-vestibular entirety and paralleled by the vagus nerve, were the central architectural axis of the human body. The two acoustic nerve functions – cochlear and vestibular, are normally discussed separately, but I am purposely putting them side by side here in order to emphasize this nerve's overall influence, particularly on verticality. Verticality is

essential to the development of language and the uniqueness of the human species rests on these three essential factors of language, laterality and verticality."[3]

We know that writing and reading depend on our ability to control our posture and receive and analyse the sounds of language which come to us through this marvellous structure and capacity of the ear. If the sounds which form the basis of language are not clearly recognised and apprehended, this can pose an obstacle to the development of our written language and learning ability. The enhancement from the sense of hearing to the sense for the word, the speech sense, is connected with our will to listen, our desire to listen. This is the psychological side of the hearing-listening activity. The developing child's initial experiences with sounds in his environment may be positive and stimulating or they may be negative and inhibit the desire to employ his listening ability. Tomatis asks:

"What kind of sounds surrounded the child in the first years of life? What was the quality of the parents' and siblings' voices? Was there music and song, rhyme and dialogue to stimulate the desire to listen and communicate?"

We have to ask: Is our voice in the classroom able to stimulate the child's speech sense? Will our speaking be able to be an antidote to the mechanical environment into which children are born? Is the tone in which we speak employing the full range of overtones? Are we, in our choice and enunciation of words making the maximum impact on the sensitive ear of the listener?

When the first Waldorf school was started, Rudolf Steiner recognised the teachers' need in this area and gave many of the first speech exercises to them in their teachers' meetings for use in training the voice.[6] This is reported in the *Conferences* and in *Creative Speech*, where after referring to one teacher's difficulties he went on to say, "I find it dreadful that there are so many colds. If people were really plagued to take a speech training, colds would disappear!" (Page 168).

As part of the 'plaguing' let us consider his spiritual research into the effects of speech on the developing child, so that we may share his concern both for the education of children and the health of the teacher at the present time.

It was after World War I that Steiner again mentioned the effects of

speech on the human being, connecting it with our sleep experience and life after death. He described how, during the first seven years of life, the incarnating soul is adjusting to the demands of sleeping, waking, the regularity of meal times, the routine of the day which gives the basis for the child's feeling of security, the rhythms of daily life – it lives in the sounds of words and not their meaning. Any perceptive mother tumbles to this when her child returns from a play group with an astonishing vocabulary of words never used at home. It will be revealing to analyse the sounds and their sequencing in these undesirable additions to a child's vocabulary when we know more of the formative effects of the single sounds, as the meaning of the words have no implication to the child. Recently my four year old godson, was delightedly rolling round his tongue an undesirable term and as mother intervened, I saw the shock on his face and then the dawning realisation that here was something with which he could tease the grown-ups. This was a salutary experience for me. I saw how the innocence of the child's enjoyment of sound was suddenly thrust into the instinctive life where it will go on working like a festering sore, ready to erupt unexpectedly under pressure.

In such a situation, the adult needs to act in a creative rather than a suppressive way. Quickly to use a new word, or, turning to the other person or older child, "Can you say macaroni" or 'whippersnapper' may distract the child's attention from the common swear word which he has picked up like a flea or a cold. Marianne Brühl,[7] recalls how to her as a toddler, words had their own special taste. What they meant, she didn't know but that they contained secrets which in future she would learn, of this she was certain. Words were like nourishment, a delicious food which she was allowed to taste.

Until the change of teeth, when a child sleeps it is the single sounds in the words which he has heard and used and with which he has exercised his speech organs, that form the content of his sleep life. It is an astonishing fact that in his sleep he is living in the essence of the vowels and consonants. We can gain some understanding of this if we consider the body of formative forces which from birth to seven years is working on the inherited body to remodel it according to his own gifts and intentions which he brings with him from the spiritual world. These formative forces, streaming from the zodiac, structure the ether body, which in turn is impregnated with the forces of the planets. At birth all that man's soul/spirit has worked out with the help of the hierarchies in his after-death life in the spiritual world is

condensed into this 'horoscope' of formative forces. He has travelled through the zodiacal circle and here has heard and experienced the creative work of the hierarchies summed up in the sound of each single consonant. From the planets, as he journeys back to a new life, he is intoned with the vowels. The planets are process forming and work via the ether body. The consonants are structure building and work via the twelve senses.

These twelve senses and their functions were outlined by Steiner as early as 1909. They are the senses of life, movement and equilibrium (now recognised as visceral input, proprioceptive input and vestibular systems) smell, sight, taste and warmth (this sense now recognised as only functional in the child from the age of twelve) hearing and speech (which is beginning to be separated from hearing by the most recent researches and specified as 'lingua') thought, touch and Ego sense. Thought and ego sense are the two remaining to be identified by neuropsychological research as specific senses.

These consonant and vowel processes enter into the new ether and physical body via the astral body. The formative forces are a composite body containing the impact of individual soul experiences and the archetypal astral structure of his own body-to-be, working into the ether body of the mother onto the hereditary physical body she has given him. It is this delicate spiritual organism of the formative forces which absorbs the sounds that have structured it spiritually and which are now perceived by the senses in the everyday world. When asleep, these sounds work back into the body of formative forces as a stimulus to growth. The other factor working like sound via the senses is light; this, Steiner says, regulates the breathing. The sounds of speech and the light filled atmosphere are the two main gateways for the soul's entry into earth existence.

We do not have to stretch our imagination very far to gain an inkling of the effect on a child's hearing when he is plunged from birth into the noise of the usual modern domestic appliances. This is a fact of life and most of our pupils have had just such a noisy background to their babyhood. Hence it is our speech, the way we use our voices, our consciousness of vowels and consonants that can awaken and work into the over-stimulated and therefore dulled body of formative forces.

The physical body which they structure, is the organ for the soul to experience itself in space, in uprightness and in the three spatial dimensions with all the resultant impressions from the outer world.

This outer world, seemingly empty of morality, is formed in the spiritual world out of moral laws. Goodness is the leit-motif for the first seven years of life; the empty space of the sense world is filled with the morality of the adults whom the child meets. Consciousness of speech will allow the innate goodness of the speaker to flow into the environment and become the substance of the sleep life for the child who then is living in the sounds he has heard uttered by the adults.

In the first seven years it is the twelvefold sensory organism that educates the physical body and one of the ways in which this is effected is through the words of the language into which the child is born.

After the change of teeth the education of the physical body is completed, but we can still bring about a renewal of health-giving forces through the way we speak. From seven and fourteen years we educate the soul of the child and it is through this that we affect the life processes and, through them, the body itself. Here beauty is the criterion. The beauty of language, our choice of words, our intonation, all this works beneficially as we present our subject matter.

The child's sleep experience has also undergone a change now that he has this new relationship to his body. When he is asleep, instead of being immersed in the daytime sounds of language, he enters into the elemental world. His ether body is now freed through the change of teeth from the maternal ether environment and so he becomes aware of the earth's ethereal body. Now the elemental beings approach him. Many children have perceived these beings in their daytime consciousness, but the change of teeth causes this faculty of perception to disappear and to reawaken inwardly in the soul in sleep. Once again children meet those beings who tend the roots, the leaves, blossoms and seeds of the plant, who live in the streams, the sea, and the air. These beings connect themselves with the animal kingdom. They guide the flight of the birds, they hover between the shepherd and his sheep and they surround the cows in the meadows. Our fairy-lore is full of pictures of sleep experiences in the elemental kingdom. The telling of the fairytales in the kindergarten and class one prepares the children for this new experience in their sleep life.

With puberty comes another change in the life patterns, as all parents of teenagers know only too well – the quantity of food which is devoured at this period coupled with a reluctance to leap out of bed in the mornings! It is as though the soul entering now into the earthly maturity of the body recapitulates the first stage of life when learning

to sleep and eat was the main preoccupation. We can understand this aspect of puberty if we recall what Steiner has said about the digestive process in adults, that the magic of our metabolism returns the plant and animal food to the paradisal condition it was in before the Fall. The force of this is reflected in the saying of grace, when we hallow the food we are about to eat. With the thrust of the soul/spirit into the limbs and earthly gravity, comes the materialistic attitude proper to this age group. Yet it is just at this time that idealism awakens in the soul. Seemingly the spiritualization that takes place deep in the unconscious of the food he requires for his growth, supports the idealism of the young person.

There is a change in sleep experience at this time as well. Now it is possible for the young person's soul to reconnect in sleep with the content of what was imprinted into his formative forces from the time he spent in the spiritual world before birth.

For this change to take place harmoniously it needs the idealism living in the teacher's soul to resound in his speaking. When this happens the archangel who 'senses' in the ether body of the adolescent, guarding it each night, becomes attentive to him. Then the sleeping soul is able to connect itself with the 'wishes, impulses and intentions' laid in the astral, ether and physical bodies for the destiny of this present earth life.[8]

If this alteration in his sleep life is not made through his own awakening idealism finding its echo in the speech of his teachers and the adults around him, then the adolescent can lose this living connection with the Archangel and instead of rising into the content of his own spiritual intentions for this incarnation he remains in the earlier sleep stage, but with this difference, he has only the husk of his perceptions of his former stage.

Steiner says: "then with the onset of puberty the young person enters a phase in the life of soul which chains him during sleep to the physical. The soul is not released from the physical during sleep. The echoes of the words coerce the soul and confine it to the physical. The resonance of the mineral world vibrates from all directions... so too does the resonance of the physical content of the plant world... If our school education is not spiritually deepened he brings (into sleep) instead the rumbling sounds of the mineral world; he brings in his blood the rustling thudding sounds of the physical part of the plant world."[9]

Today our speech is being divested of everything that promotes descriptive power, rhythm, measure, melody, dramatic effect, everything that leads it back to the realm of the soul, when the imaginative element lifts it into the spiritual world. These words spoken in 1923 have been prophetic.

Our general culture deprives the young person of receiving the impulses which should help him to pass over to the healthy experiences of sleep. This may account for the adolescent's absorption in disco and hard rock and the walkman habit.

The effect of hard rock music on the body has been described in the work of Drs E W Flordorf and L A Chambers who found, in a series of experiments, that shrill sounds projected into a liquid medium coagulated proteins. It was a recent teenage fad to take eggs to rock concerts and place them at the foot of the stage. Midway through the concert the eggs could be eaten hard-boiled as a result of the music. The comment of the doctors was "Amazingly few rock fans wondered what that same music might do to their bodies."[10]

Tomatis points out that the highly rhythmic low frequency sound of rock, disco and other modern music appeals to young people because it heightens the level of body sensation, but the quality of sound diminishes the ear's ability to listen.

Steiner's research in 1920 revealed that every sound experience perceived through nerve fibres is first received in the limb organization. Thus we come full circle. The poor body image – the picture we carry inwardly of our limbs and their movement – that so many children have is, in the majority of cases, the result of poor vestibular development and control.[11] This lack of good body image deprives them of the stability of self-identity. Hence the need for body stimulation by sound. The intensity of sound coupled with incessant beat works destructively on just that part of the ear which is attuned to receive the tones which underlie speaking and language communication.

Such is the tragedy of our time where souls longing for their spiritual origins, are trapped in the husk of the physical, unable to attain the sleep experience proper to their stage of development.

Here we are face to face with the demands of our age: that for the adolescent, idealism shall be reflected in our speech, that beauty of language experience shall suffuse the class teacher period, and human goodness flow into the environment of the pre-school child. These are the elements that should shine in our enunciation, warm the tone of

our voice, regulate its pitch and rhythm. If these intentions are to be realised with the maximum effect on the listener, we need a flexible and practised instrument.

The following chapters are an attempt to give teachers an understanding of the basic knowledge behind anthroposophically orientated speech training exercises which have been selected especially to help develop good clear speaking in the classroom. Methodically and perceptively used they will meet our teaching needs for ourselves and our pupils until we can find a teacher of speech formation who can take us further.

## *The Vestibular System*

Our ear formation has two aspects, the part that retains its consonance with the pre-earthly life, and the part which has adapted itself to the needs of the human organism that enters into the forces of gravity. Just as in the form of the human figure, we have the head which reflects the dome of the heavens and the trunk and limbs that connect us to the earth, so the two-fold nature of the ear reflects this in miniature. Metamorphically speaking, the stirrup (stapes), anvil (incus), and the hammer (malleus) are the transformed thighbone with its attachment to the hip, knee, lower leg and foot. This little foot 'walks' on the 'earth' of the ear drum, and the movement of its walking is carried further into the inner ear complex. This is the site of the vestibular system – those organs responsible for keeping our equilibrium and position in relation to space and gravity. This part of the inner ear is known as the membranous labyrinth, that supports the delicate tubes of the semi-circular canals and the cochlea.

The semi-circular canals orientate us in space through the movement of the liquids they contain. Another set of sensory cells in this complex reacts to movements of the head in relation to the gravity of our body. These are the otoliths, organs with chalky granules embedded in a jelly-like substance, which tell us how our head is held. Neglected colds and catarrhal conditions in children result in 'glue-ear' that stops the work of the otoliths, bringing about postural problems, partial or intermittent hearing.

This complex system is responsible for the correct tension and relaxation of our muscles in movement. If children do not move freely, have restricted movement through illness or at a critical age,

when learning to walk, for example, the muscles of the ear drum become slack and react only to low frequency sounds. Due to this, the sound is not focussed properly for the cochlea to send enough stimuli to the brain. The child seems 'dull and clumsy'. This lack of high frequency sounds affects the vocal apparatus: the child does not 'hear' what he says (Tomatis effect). The soul has to use an 'untuned' instrument.

To energise the voice we have to work at the vestibular level – through the sense of balance and self-movement. We have to use singing and speaking to awaken the listening ear (the high frequency stimulation of the cochlea). We have to engage the child in moving to music, skipping, hopping and Tone Eurythmy. This will strengthen body posture, gestures and the timbre of the voice.

Singing and speaking spring from the soul and spirit. They are food for the nervous system offered as the foundation for soul activity by those spiritual beings connected with the evolution of the human body. Singing, folk and country dancing, speaking and drama attune the whole body, stimulating the brain so that the individuality can take hold of his body properly.

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# *Chapter Two*
# *The Speech Organs*

"The structure of speech has formed the organs. For healthy speech organs we must start from healthy speaking."

Rudolf Steiner,
*Speech and Drama Course*

It does not take long for a child to find out that he can disturb a group of talking adults by poking out his tongue at them. This little waggling red muscle leads us from movement through speaking into thinking. There it lives in its cave, all moist and warm, guarded by two rows of stonelike sentinels and woe betide if it tries to pass them by for they are biters!

The tongue is at first an extension of the digestive tract, gradually its sensitivity awakens and it reacts to pleasure and dislike; different areas become specialized for perceiving different tastes, a fact we can bring into our pupils' awareness in the period on Human Science in Class 7. If the tongue is overcome by the digestive process, then it becomes unwell and puts on a white coat or it develops pimples at the root; or it may become lazy and grow a little too fat, always edging up against and pushing over the boundaries and when the mouth opens it slips between the teeth and produces a lisp.

This organ is a miniature of the capacities of the human being it serves. It can lift itself up and down, move to right and left, go forward and back just as we can move our whole body in space. Expansion and contraction of the tongue is possible, as are stretching and withdrawing. It lives in air, water and warmth, and can help us express our deepest emotions. Its conditions of life remind one of the human being in Atlantean times who lived in moist airy surroundings and whose limbs expanded and contracted in concert with the desires of the soul. The tongue is indeed the memory of the soul's life condition in Atlantis, but has now become the soul of the speech organism and

as such undergoes 'the Fall', just as the human being has done. Before puberty the tongue is free and the young child is able to sing any range. With the change of voice the root of the tongue becomes heavy. There is then a gap between it and the throat which makes swallowing into a separate activity. Until this time children can tip their drinks down their throats without swallowing and, to a certain extent their food too! How many times do we have to say, "Chew your food and swallow properly." After puberty this ability disappears, swallowing becomes a function on its own. Boys develop the 'Adam's Apple' whose movements reveal this function of swallowing as a separate activity.

Opposite to the root of the tongue stand the teeth. In pressing against them the tongue develops its strength. They dam back and release the breath, they are the consciousness bringers to the 'will-being' of the tongue. The lips mediate between the will and thinking of tongue and teeth. They soften the hardness of the teeth's activity, they vibrate with the passing of the air. In our speech organs we have a representation of the whole man as a soul being of thinking, feeling and willing.

Is it any wonder that our speaking reflects our whole nature? How the way we speak works on in the person listening, healthily or negatively and that speech offers us a means of therapy?

## *The Breath*

"We learn to breathe correctly by letting a number of well placed sounds run through the speech organs, training them in this way."[1]

R Steiner

The sounds of speech should be carried by the breath into the world. More often they fall into our lap and our listener has to ask us to repeat what we are saying. In other words we are swallowing the sounds, holding them back on our breath. The modern person hardly notices the fact that he breathes. Maybe the need to experience our breathing has perhaps something to do with the popularity of jogging, as this forces the breath into our awareness. In the activity of filling the lungs, the spinal fluid's activity is increased under the impact of the deepened breathing and so it pushes more strongly into the brain ventricles, producing the exhilaration that the jogger enjoys.

The various yoga disciplines also are a means of satisfying the westerner's estrangement from his breath... "God breathed into man the breath of life..." an archetypal image which lies deep in man's soul and seeks affirmation through his own breathing activity.

There are two types of breathers – those who hold their breath back, never fully expelling it as they speak and those who pour it out and never fully breathe in. The person who breathes in deeply, with a shallow out-breath, is one who cannot easily forget. They take things in and hold onto them, thinking twice before taking any action. Those who breathe out deeply are likely to be the ones who are "unable to remember" because the outer events do not make sufficient impact for the soul to retain the impressions. Everyone has his own way of breathing and this should be observed.

In Waldorf education[2] we try to work healthily on the breathing of the children by the way we arrange the Main Lessons. For example, a reflective time is followed by a physical activity: by the tension and relaxation in the sequence content of the stories we tell: by seeing that in a lesson the children laugh and are brought near to weeping. This exercising of the soul works on the breathing. No stagnant unused air should settle in the lungs, neither should they be sucked dry of air by too long periods of listening.

The air we breathe is the physical basis for community, it is the element we share with each other, with all mankind. One minute it is in me, the next in my neighbour. An image of our being is imprinted in the air we breathe and by this process the air is ensouled. If we are not strong enough to do this properly, it can become the basis for illness. For example when we cannot transform the temperature of the air we breathe into the same temperature as our body we get a cold! The untransformed air is a foreign body and we become infected by what it carries. Hence the importance of warm air, especially where intellectual work is being done. Wearing warm clothes in a low temperature is not enough as we have still to use our forces in transforming this insufficiently heated air into our own temperature. This takes away the powers of attention and the concentration span and binds the soul too closely to the physical processes. Steiner stated that in a temperature under 70°F spiritualized thinking is inhibited and we can only think thoughts that reflect the mundane instinctive habits of thinking which we have unconsciously absorbed from the environment in which we have been brought up.

All these facts have pedogogical implications for both teacher and

pupils. The first task is to find a remedy for ourselves. This will start the harmonizing process which our pupils will experience and imitate.

How can we change bad breathing habits without bringing our consciousness into a process which is under the guidance and guardianship of spiritual beings, something into which we should not intrude with our consciousness?

"We need to turn to the sounds themselves and in uttering them the breath becomes correctly used and distributed."

Rudolf Steiner gives for this a basic exercise in which sounds that act as an obstacle to the breath are used in a specific sequence.[3] On each line of sounds the breath is to be completely used up, consequently the intake of breath will respond without our interference.

## *Breathing Exercise*

First – take *no* breath to start.

Just say 'S' with whatever air is in you, it should sound like a tyre going flat, use it all up and then you will spontaneously take enough breath for the next sounds. On each line of sounds the breath must be used up.

The sequence is as follows:-

| | |
|---|---|
| S | teeth |
| SF | teeth, lower lip |
| SFM | teeth, lower lip, and both lips |
| LSFM | the tongue now comes into action |
| KLSFM | the soft palate |
| LSFM | |
| SFM | |
| SF | |
| S | |

Notice how the entire speech organism is engaged.

Daily practice of such an exercise changes sluggish breathing habits, works on the circulation, and makes our speech organs agile.

# *Chapter Three*
# *Rhythm and Metre*

Rhythm is centred in our bodies in the interplay between the in-breath and out-breath, and the heart beat which accompanies this activity. Breathing continues from the moment we are born until we die: we are dependent on our rhythmic system for life itself; it never tires, never has a day off. Like the sun, it keeps constant time and is our faithful servant in carrying the stress and strain we put on it uncomplainingly for a lifetime.

This life rhythm pulsates in our movement and our speaking. We skip, we dance, we sing with it. At its highest level poetry arises, the art form which engages the consciousness soul, the member of our soul in which the ego awakens to itself as a spiritual being and grasps the fact that the earth, too, is an expression of that same Creator Spirit. This soul constituent is based on the physical body and the art of poetry embraces the inner movement, rhythm and speech which arise from it.

We can understand from this why the bards in our western culture were men who were leaders in their communities. Their faculties of soul were, through training higher than those of ordinary men. They were the poets, historians and healers of their time, like the priests in other cultural periods. In their temple sanctuaries the sacred name of God was uttered in the ritual only after due preparation was made by the officiating priest. Later, when the sacred word or rune was written down, an error meant the death penalty for the writer.

The bards and poets of pre-Christian times had prodigious memories supported by the metre and rhythm in which the poet embedded his experiences. Tribal war dances and chanting before battle were means of enhancing the army's physical and psychic endurance.

The Scottish war cry or 'slogan' is of remote antiquity and was greatly feared. A remnant remains in the cry 'Crom-a-boo' and 'Butler-a-boo'. We can imagine the effect of a horde of voices shouting

'a-boo'. The long penetrating 'oo' with its excarnating, shivery effect could dishearten any unprepared foe. So much dissension was caused by war cries that they were forbidden in 1495 and only the reigning monarch's cry was allowed.

The earliest recorded war cry is 'The sword of the Lord and of Gideon' (Judges 18.v.8.) Centuries later we hear it echoed in the watchword war cry of Cromwell's army 'The Lord of Hosts' at the battle of Dunbar, September 3rd, 1650.

The usual war cry of the Kings of England was 'Montjoie-Notre Dame – St George' The victory at Crécy was attributed to the special invocation of St George.

The address of the Sovereign or general before battle had its effect on the listeners, not only through its content, but through the sound sequence and the rhythm of the oratory. Those of us who experienced inspiring war speeches can remember the effects of the word choice and the mounting rhythm of sentences. Such is the efficacy of language.

In the day to day life the gods were also invoked in mantric metres to give their protection and blessings in the home, on the farm and in the throes of famine and disease.

Alliterative, poetic speaking was the foundation of communication in the dawn of history.

The oldest western metre is that of the dactyl ... ˉ ˘ ˘ . The long beat carries the resting moving quality of the head, the short beat takes up the restless moving quality of the metabolism. This metre is the basis of the hexameter, where the intake of breath and the underlying beat of the heart are in balance. It is the metre of the Greeks, whose whole culture was epitomised in striving for balance and harmony in mind, soul and body. Three thousand years later a response came from man's soul to this incarnating metre in the mirroring measure of the anapest, ˘ ˘ ˉ .

The hexameter is a metre which trains us to acquire the correct manipulation of tongue, palate, lips and teeth. This measure teaches us to form the consonants in speaking and reading and to give full value to the separate sounds, controlling the breath without the interference of our consciousness.

Unfortunately, this is not a metre which lends itself to the English language and it is here, in the subtle difference between metre and rhythm, that we come into difficulties with English poetry when we apply to it Steiner's observation that, "it is strongly marked rhythms

that aim at taking hold of what is instinctive and developing it through education," and that the rhythm of the poem in group recitation helps the incarnating process.

The rub is that in German, as in Greek, metre and rhythm blend together, whereas in English, the metre supports the rhythm and if the speaker falls into the metre, he loses the rhythm and therewith the innate being of the poem.

James Reeve in his book *Understanding Poetry* devotes two chapters to rhythm and metre which are very well worth studying:

"Metre, meaning measure, is the name given to formal rhythmical patterns in which poetry is usually written. Rhythm is a general term applying to all movement or flow in which a pulse is perceptible. Metre applies solely to verse. You could say that the beating of your heart is rhythmical or that the throb of an engine is rhythmical but not that they are metrical. Rhythm is the larger, more general term, metre the smaller, more particular."[1]

We could also define metre as the quantitative element. The typical metre for English verse is the iambic pentameter. Rhythm expresses quality. The surest way to harm the breathing and rhythmical system and ruin the ear for poetic sensitivity is the mistaken practice in the classroom of *speaking*, walking and clapping a poem to its metre. Only for pedagogical reasons, temperament verses for example, should stepping and clapping with the metre be used and it is the teacher who then speaks the verse. If we walk and clap a *poem* in its metre in classes one and two, we are forgetting that Steiner told us that children should not be confined to the classical metres until after the ninth year crisis... the time when the child's consciousness changes in his relationship to his surroundings. He begins to stand in the world and view it as an object and himself as subject. Until that time song and dance is the medium for metre and rhythm.[2]

This is fully born out by Tomatis's research in the following passages:

"The main characteristics of music, namely tonal pitch, timbre, intensity and rhythm, are all found in spoken language. For this reason, music prepares the child's ear, voice and body to listen to, to integrate and produce language sounds."

"Children's songs and nursery rhymes harmonise body movements and motor functions by their effect on the vestibular system and the ear. They also increase the child's awareness of his body and help shape his body image. It is useful to view the body as an instrument which allows language to be expressed. Helping the child to master the 'body instrument' with music and song paves the way for successful language development. It is interesting to note that over a hundred of the body's muscles are used when speaking. We must remember also the importance of motor functions in writing."[3]

Needless to say our traditional and modern singing games provide ample material for this important activity in the first two school classes.

Fundamentally, rhythm is everything contained in expansion and contraction, be it high, low, swift, slow, loud, soft. These are expressed in the subtle changes of metre so characteristic of English poetry. If we fall from rhythm into metre when reciting we destroy the life and meaning of the poem. English poetry has an irregularity of rhythm like the waves on the shore, the 'phlump' of the breakers on the shingle is its metre, the swinging swoop of the seagulls across them is its rhythm. The tensions between the two are the essence of the poetry.

"Over hill, over dale
Thorough bush, thorough briar.
Over park, over pale,
Thorough flood, thorough fire"

Lines like these are often said in classrooms mechanically hitched to its ˘ ˘ ˘ metre, which results in jerky breathing and destroys the whole element of movement in the poem.

In speaking these lines the breath needs to flow above the word "over" and rest on the liquid 'l' ready for the next flow of sound to the following 'l'. Then the breathing is smooth. The spring of 'k' in the third line is like the jab of the seagull at a scurrying fish, which eludes it as his powerful wings carry him to the next 'l'. The following lines are spoken entire on the next two breaths, like the sweep of the bird on a thermal current that lifts it over the racing waves:

"I do wander everywhere
Swifter than the moone's sphere;"
Midsummer Night's Dream

Another way of expressing the same problem is demonstrated by Walter de la Mare in a note in his book *Come Hither* where he describes stress in a line and the cadence of the voice with the first stanza of Drayton's *Agincourt*.

Fair stood the wind for France
When we our sails advance,
Nor now to prove our chance
Longer will tarry.

He points to four ways of stressing the lines

1. Fāir stŏod thĕ wĭnd fŏr Frānce.
2. Fāir stŏod thĕ wĭnd fŏr Frănce.
3. Fāir stŏod thĕ wĭnd fŏr Frānce.
4. Fāir stŏod thĕ wĭnd fŏr Frānce.

He says number 1 is a miserable sing-song, 2 is mere capering, 3 is stern, solemn, resolute, 4 admits the greatest variety of rhythm and intonation.

Remembering how few of us have had inspired teaching in poetry and that for many even Shakespeare would be an unknown quantity but for school-leaving examination requirements, it is the first version we are most likely to hear in our schools because Steiner's observations on rhythm have been confused with metre. The matter is further aggravated by the beautiful German recitation in some schools and the attempts to follow this style in English poems.

Walter de la Mare concludes "In general, if you read a poem quietly over, first to your head, then to your ear, most technical difficulties vanish like morning mist."[4]

For us as teachers the hexameter can be used as a general speech exercise. These lines from Kingsley's *Andromeda*[5] have captured the metre without excessive torture of the language.

"Over the mountains aloft ran a rush and roll and a roaring;
Downward the breeze came indignant, and leapt with a howl to the water,
Roaring in cranny and crag, till the pillars and clefts of the basalt
Rang like a God-swept lyre, and her brain grew mad with the noises.
Crashing and lapping of waters, and sighing and tossing of weed-beds;
Gurgle and whisper and hiss of the foam, while thundering surges
Boomed in the wave-worn halls, as they champed at the roots of the mountains"[4]

In the classroom this metre is suitable only after the adult ratio of breath to heartbeat has been established during class 5, when Grecian culture forms a main lesson. This is the earliest time it should be used, and then judiciously. The soul is forced into the organism too heavily if it is used prematurely or too intensively in speaking, as the speech organs do not reach their full development until class ten (16 plus year).

Here is an example of the metre composed for practice:

"Deep in the heart of the mountain
Crystals are hiding their beauty,
Waiting for someone to find them
And lift them aloft to the daylight.
There they can sparkle in splendour,
And flash from their heart's brilliant colour,
Kept from that far off day, when the
Earth was still growing as we are.
Diamonds of many hued brightness
And emeralds and sapphires and rubies,
So that a queen may wear them,
Stones with a heart of fire."

Maisie Jones

Steiner also directs our attention to the trochee metre ( ¯ ˘ ) as one which educates the adult speech organs in the pronunciation of consonants in such a way that, in the telling of fairy tales and legends, we use the correct intonation and emphasis. The listening children will at once recognise that, although the incidents appear as if they are happening in the everyday world, we are actually describing to them events of the soul in the elemental or spiritual worlds. If we attain the

correct style in the telling of fairy tales and legends there will be no nightmares or fears caused by the strict retribution for evil doers, or terror of the Baba Yaga's voracious appetite.

De la Mare's poem beginning "Ever, ever, stir and shiver..."[6] is an example where the trochee metre blends with rhythm sufficiently to be used for this purpose.

Such indications followed up by energetic and regular use lighten the teacher's work, making lessons more effective and maintaining discipline in the class.

When reciting as a class, too many children "sleep" in the metre if this obtrudes over the rhythm, losing consciousness and allowing those with a good memory to carry them. The end result is that many children cannot remember the poems they have learned when asked to speak them alone. Steiner calls this the shadow element in chorus speaking which, he says, must be remedied.[7] We can do so, if, after working at the poem with the class, we divide the verses between groups of children so that they are alert to follow on. When this has been practised we can further individualise by calling on different children to say a verse. We can use our teaching technique for 'temperaments' here, warning the melancholic that he will be asked tomorrow, and telling the phlegmatic which verse he will be required to say, and the sanguine that he will say the last line of that verse with him. When the group is in full flow we can stop them and point to the choleric and say "now you go on!"

The teacher must be alert to find out those who really know the poem and those who 'sleep' and need pedagogical help to awaken their faculty of memory. Steiner points out that memory is at its greatest peak between nine and twelve years and needs constant exercise if the faculty of learning by heart is to be retained as an adult. These treasures of our language are learned in order to be a storehouse of refreshment in later life, as the joy of recall in remembering a poem is a stimulus to health of body and soul. Therefore, allowing a class to learn poetry without seeing that the memory of each child is also in action vitiates the whole purpose of the activity.

The recitation of poetry requires an artistic perception of rhythm. But when a teacher writes verses for a particular child, the force of the metre comes into its own. Pedagogical verses that address the temperament are of the utmost importance. The treatment of the temperament is the explicit responsibility and duty of the class teacher. Each temperament has its own metre and through experiencing it, the child

can gain self control and gradually transform his temperament so that it becomes, when he is an adult, an organ of perception and not something he uses as a way of justifying himself and his point of view.

The subject for the verses should be taken from the main lesson, be it Bible stories, Norse or Greek myths; Odin and his deeds can supply verses to fit all temperaments. (How the melancholics love the incident when he sacrifices his eye to Mimir!) Such verses belong to the pedagogical work that is done in Main Lesson. This is the time when the child's problem with his incarnation is helped either individually or in groups of two or three by an exercise in movement, form drawing, painting or speaking. This was instituted by Caroline von Heydebrand in the first Waldorf school with Steiner's approval and he himself contributed speech exercises for some of the children.[9]

In the younger classes, the children regularly spoke their 'report' and birthday verses. This individual pedagogy formed an important part of the main lesson, the original 'remedial' work. It was given to us in our training as an integral part of our teaching technique, but this practice seems to have been overlooked in many schools since the sixties.

All children should be expected to take their turn in this class activity, the gifted as well as those with a specific need such as poor memory, lack of concentration, unskilled movement, etc. In a class of thirty, every child can be called on at least once a week, and the ten to fifteen minutes this takes brings ample reward.

Included in this should be rhyme verses that help children's pronunciation and clarity of speech, verses which exercise the whole speech organism and make it agile.

"Row boatman row!
Row boatman row
Over the foam and far from home
Row boatman row."

or

"The rain comes pittering, pattering down,
Plipperty, plipperty, plop!
The farmer drives his horse to town
Clipperty, clipperty, clop!
The rain comes pattering
Horse goes clattering
Clipperty, plipperty, plop!"[10]

Again, it is important that this is done in small groups in classes one and two, so that we can really hear that the children master the sounds. Even so, speech therapist, Clive Sansom warns that:-

"Care should be given to rhythm. It is important however, not to confuse this with metre: flow and flexibility are essential. Over stressing should be avoided."[11]

Before class three, speech and pedagogy working together in this way is more effective than only chorus recitation for producing good enunciation, correct breathing and laying a foundation of poetic appreciation. Only after the ninth year crisis when the breath to heartbeat rhythm of the adult is being established, is the feeling life mature enough to live in the artistic perceptions of poetry.

Excess of temperament is a factor which hinders learning. This abundance can be 'siphoned' off by using the appropriate metre. The verse for *speaking*[12] should be constructed for –

Sanguines on ˘ ˘ – / ˘ ˘ — Anapaest/Iambic

Cholerics on ˘ ˘ ˘ ˘ — Choriambus

Phlegmatics on ˘ ˘ / – ˘ ˘ — Trochee/Dactyl

Melancholics on ˘ – ˘ — Amphibrachus

A verse made for a sanguine child goes:

"The horseman is riding out over the hill
For many a mile he must travel it still
Creatures that creep and the birds that fly
Note his passing as he goes by."

Joan Wyles[13]

The cholerics would enjoy this based on the Grimms story *Seven at a Blow:*

Giants stamp and rage
Shout like thunder's roar,
Tramp with heavy tread

O'er the forest floor
But the tailor's so nimble
The tailor's so light
He'll trick them all neatly
And put them to flight"

Heather Thomas [13]

The following verse, with its picture of sleeping and waking, would satisfy the phlegmatic:

"Big brown bear
Sleeps away the winter cold
Deep down there
Where the snow lays fold on fold.
When springtime comes to wake him
From his winter bed we'll shake him.
Through the springtime woods he'll go
And see the leaves and flowers grow,
Where the bees will make their honey
Smooth and gold and sweet and runny"

Joan Wyles

The melancholic is particularly individual in his needs and response, but the following would help him with its strengthening repetition:

God the Father, wise in all things
Wise in all things, be my guide.
Guide me through this world of beauty
Finding love on every side.

Heather Thomas

Heinz Müller, one of the early Waldorf teachers, gives us a host of examples in his book on writing reports and pedagogical verses. He shows how a metre can be led over from one going with the temperament to one helping its harmonization. Even though the metre is the dominant element it should be spoken with sensitivity to the breath flow.

When we give time in our classes for this work we build up the unity of the class, the interest of the children in each other and joy in one another's achievements. This is social education at its most practical.

# *Chapter Four*
# *Sound Groups*

In the alphabet we have two types of sounds. First those that have the power to form and have a definite structure with a beginning and an end; they are the consonants and can be characterized as 'shaping sounds' in the construction of the word. The remaining sounds, fewer in number, are those which we can carry on our breath, continuing on and on until our lungs are empty. They are expressive of our feeling, and they are evoked by something outside us to which we respond – a sunset, a snake, or, so intense may be the feeling we have in our soul that one of these sounds bursts from us in an exclamation of surprise, fear or pleasure. We can characterize these as a musical, singing element within speech, the vowels and diphthongs without which no word in European languages would exist.

Let us look first of all at the consonants, their qualities, their structure and the way they use our speech organs.

B, P, M, W, are the sequence of consonants which are formed by our lips and so are called labial sounds. Our lips have to be alive and mobile to make them. Nowadays the lips of so many people are held quite stiff when they speak, or they are over-relaxed and flabby. In neither case can one easily hear what is said. These unused lips mean that the soul is inactive; it does not hover on the lips and so cannot enter fully into the sounds, impressing them into the ether body where our thoughts live. In this inactivity could lie the seeds for poor memory in later years. The poor articulation of such sounds works back onto the hearer; if it is a child, he has nothing to imitate. Neither do the sounds stimulate his formative forces. B, P, M, W, call on the soul and children need to hear them fully articulated in the many rhymes and songs they hear in the kindergarten and early classes. If the children themselves do not pronounce them clearly, then we must activate their hands through modelling in beeswax, teasing wool, etc., for lips and hands are interconnected.[2]

F, V, S, Sh, C, Z are consonants that use the teeth.[1] They are known as dental sounds. They have a strong forming power into the physical. We can almost see the air slithering in a line when we make the sibilant S. It is a sound that can be used to subdue a noisy class. Just try a soft long S and you will get attention, but be ready to grasp it when it comes! We can make ourselves aware of the forming activity of these consonants by saying a poem and noticing how frequently and where in a line or a verse they occur. The poet will choose just enough of these sounds to give the imagery its structure.

N, D, T, L, require our tongue to leap about and so are termed lingual sounds. The astral body has to get working – our tongue, the soul of the speech organs, and the hard palate are required to form them. The softness of the tongue, the hardness of the dental ridge call on the forces of sympathy and antipathy which are engaged when producing these four consonants.

If the class we are teaching is restless and swinging from one extreme to the other, then verses with plenty of these sounds in sequence will school the swing of feeling and can often bring about a state of equilibrium in the soul life.

Try one like the following:

Natalie's toes are twiddling and turning,
Twiddling, twisting are Natalie's toes.
Does Natalie know her toes are turning
As she is trying to learn?

Another agility sequence:

Moses supposes his toeses are roses,
But Moses supposes erroneously;
For nobody's toeses are posies of roses
As Moses supposes his toeses to be.

This will exercise the energy that often lapses into restlessness.

Peter Piper picked a peck of pickled pepper
A peck of pickled pepper Peter Piper picked.
If Peter Piper picked a peck of pickled pepper
Where's the peck of pickled pepper
Peter Piper picked?

The above is part of our language heritage. A shorter one to use with older children is:

> The praiseful princess pierced and
> pricked a pretty pleasing pricket.
>
> *As You Like It*

It is important to consider the sound gestures and their sequencing, noticing for example where the sounds themselves work against agility:

> Swan, swam over the sea,
> Swim, swan, swim.

This calls on the S to slide into the W and penetrate the M. To say this speedily would make a very choppy lake from which the swans would soon fly off! The true tongue twister is a sentence in which the sound sequence requires the thinking element to direct the speech flow. This type of dexterity exercise should be left to a later age, 11-12 (Class VI). New teachers could do well to consult books compiled by speech therapists, where the use of the sounds in the verse is clearly explained.

To produce G, K, Ch (as in loch) and Ng, we need the soft palate where the back of the mouth and the root of the tongue meet. These are called the *palatal sounds*. They engage the ether body and stimulate growth. If there are short chubby children whom we sense need to elongate, Steiner suggests that we can perhaps help them by using these consonants in suitable verses. If the children cannot make them, then they should practise conscious stepping. Ask their eurythmy teacher to do threefold walking with them. When they are in the playground, arrange a game where there is a line of bricks evenly spaced so that the children have to step carefully from one onto the next as the palatal sounds are felt in the heels.

Another way of arranging the consonants contained in these four catagories is to see how they are using the breath.

H, CH (loch), Y (yacht), S, Sh, F, W, V, TH, are all *blowing sounds:* we hear their gesture as tone. They reverberate in the air and engage our hearing. They are not dependent on us once the breath is active. Warmth is their particular quality.

With T, D, P, B, G, K, M, N, we can almost 'see' the sound. They

strike down, have an independent form and are completed. The breath is structured and contained. Look around the room and notice how many of the objects – i.e. nouns – have one or more of them in their names. These are *earth sounds*.

In contrast we have L, the liquid watery sound, which unites with everything; and R, where the air is tumbled about and rolls on and on. Thus we find the four elements – the warm, the earthy, the liquid and the airy – present in the consonants.

Steiner helps us to understand his other indications by these groupings into types of sounds. When we group the sounds under the four elements we have the basis for using the sounds when making verses for the temperaments:

Earth – D, T, B, P, K G, M, N;
Water – L;
Air – R;
Fire – H, CH (loch), Y (consonantal), Sh, S, F, V.

In the case of the child, the temperament 'stands in' for the ego. Through knowing the sounds and metre that engage the particular temperament, we have the tools with which to proceed.

In order to improve our own speaking, here are two very basic indications of Steiner from the *Speech and Drama Course* p. 373:

"For speech to be alive and effective so that meaning penetrates, we need to combine R with the blown sounds."

How many of us find that our instructions in the classroom seem not to be heard? Our voice does not contain the firmness that impresses discipline. An exercise sequence for practice will be found in the description of the constellation of the Bull.

Steiner also suggested that teachers continue to practise, "uniting the impact sounds of BP, TD, MN and KG with the wave sound L which will make your speaking have clearly defined contours and at the same time flow well: your words will be formed and finished and yet follow one another in the sentence with ease and fluency." And, "unite impact sounds with water to bring them to fluidity and reverse the sounds." Here we have vital pedagogical techniques for ourselves as teachers. Combining the above indications with another which

advises that, "we can get away from the intellectual meaning of words if we 'reverse them'", we then can use such an exercise for both traits.

| | | | |
|---|---|---|---|
| marl – alarm | dale – laid | bail – label | mail – lame |
| tale – late | nail – lane | kneel – lean | keel – leak |
| peel – leap | mile – line | tile – light | dole – load |
| bowl – lobe | mole – loam | pool – loop | tool – loot |

And for the short vowels:

| | | | |
|---|---|---|---|
| pal – lap | dell – led | mill – limb | poll – lop |
| gull – lug | | | |

And the diphthongs:

| | | |
|---|---|---|
| dowl – loud | toil – loiter | towel – lout |

It is important to sound both L's separately, carefully listening to see that the L at the end of the first word does not do double work by being used to begin the second one. This is the crux of the exercise and unless we are awake enough to hear what we are doing, the exercise will not have its effect.

"Hearing into speaking is the law for speech."

"Start from hearing, from hearing yourself"

This is advice that is constantly being reiterated.

When we work with such exercises our ego awakens in the activity of speaking. We are no longer carried along with thoughts emerging from our ether body, expressed by our soul with its subjective elements. Talking can take hold of us an an activity with its own will! Ask a person to repeat what he has just said and we see how little his ego was involved in what he was saying. We should not forget that:

"We have been occupied with talking throughout the day, and we have put our souls into what we have said. And what we have put into our speech, that we take with us into sleep, and it remains *our being* between sleeping and waking."

As teachers it is essential that we articulate clearly. Distinctness, fluidity, enclosure and membering all play into clear articulation. We need to practise the consonants Steiner indicated. I have not used his particular exercises in their English equivalents, as these should first be done under professional guidance, but rather rely on the inherent artistry and wisdom in the poet to awaken a sensitivity which will school our listening and, with it, our articulation.

## *Distinctness in Speaking*

M combined with S produces distinctness in speaking. Say some M S's (MMMSSSS...) and see how active the lips have to be, they soon tingle with the fresh blood pouring into them to feed the muscles. Now say the following five times:

> Melting melodious words to lutes of amber.
>
> Herrick

*Fluidity of language* requires conscious control of the L:

> Like leaves that laden are
> With trembling dew.
>
> Herrick

Practise such a line ten times daily and your ear will soon awaken to the lazy L's in your speech.

## *The Element of Enclosing*

Often the vowel sounds in our speech protrude – something our tongue is never allowed to do. We speak thrusting the vowels out between the consonants which should enclose them just as the teeth act as the boundary for the tongue.

Try saying each of these lines five times and feel the effect:

> The bleat of bats and bounce of rabbits
> Bubbling under the hill
>
> Laurie Lee

The baiting place of wits, the balm of woe.
Philip Sidney

The bud of the briar
The bag of the bee.
Ben Johnson

## *Membering*

Fitting our words together so that clarity arises in thought and tone requires that we practise the sound K.

Cold, cold the cruel King,
Cold the crystal cave,
Crafty gnomes there
Creep and cling,
Cunning clefts they clave.

Such aspects of speech can be kept in mind when selecting poems for children. The alliterative verse used in class four gives them and us a good opportunity to practise the consonants that give speaking its full quality.

Every word has vowels and diphthongs sounds. They are directly connected to man's inner being, both his emotional soul life and his bodily functioning. They work in the seven life processes which are connected to the astral activity of the planets reflected within our ether bodies. These life processes are:

*Secretion (preserving).* This is the retention of the substances needed for building the body: calcium for the bones, proteins for the muscles; and the excretion of poison. This is the function of the kidney, into which the forces of the planet Venus radiate. The vowel sound underlying this activity is Ah.

*Nourishment:* The power of breaking down all the substances taken in and digesting them. This is brought about through the forces of the planet Mars. A, as in fate, is the sound at work here.

*Growth:* The total growth organization of the body responds to the activity of Mercury whose sound is E.

*Warmth:* The maintenance, not only of the constant temperature of the blood, but also of the specific temperature of each organ. The ability to transform the air we breathe into the same temperature as our body. Here Jupiter is active in its sound O.

*Breathing:* This means not only the movement of the air through our lungs, but the greater breath of incarnating and excarnating. Saturn rules this process with the sound U.

*Reproduction:* This is the power to reproduce one's own species and also the mirroring activity of our thought processes. Here the Moon and its accompanying sound I holds sway.

*Sustenance - absorbing.* This is the all embracing life process of absorbing all that is taken into the body. The Sun regulates this life process, its sound is Au (ow).[1]

Steiner gives only a few specific exercises for practising the vowel sounds and because of their connection with the life processes, these exercises should first be practised under the guidance of a qualified teacher. What we have to do, working on our own, is to listen to ourselves speaking and notice if we are letting the vowels push themselves too strongly into the consonants, or if we are biting them off, or squeezing them between our teeth and the consonants.

Lastly, the vexed question is, when, oh! when shall we have time to practise all this? There is a painting lesson to prepare, poetry to learn, eurythmy classes to attend, endless meetings and lesson preparation... Ten minutes before breakfast is a counsel of perfection if there is a family to get ready for school, as well as ourselves. Short of practising daily an hour a week, an effective rhythm is to practise daily for two weeks of each holiday, strictly adhering to this rhythm, holiday after holiday. In the pause between, and in all situations, reading a poem every night can refresh, enlarge and bring balm to our soul and is the best silent teacher of language.

Here is a description of Rupert Brooke reading his own poems: "He could read well, quickly, shyly, with little variation, dwelling slightly on significant vowel sounds, emphasizing each rhyme and rhythm ... taking care of the sounds and letting the sense take care of itself."[2]

And from Rudolf Steiner in 1924 to an audience interested in speech and drama: "Meaning comes into speech when we do not check the process of living in the sounds that are determined by our organism. Hold to the sound formation and meaning leaps into it!"

# PART II

## The consonants and their assignment to the constellations of the zodiac

*"You yourself are even another little world and have within you the Sun and the Moon and all the Stars."*
*Origen*

The following vignettes of the constellations and their sounds, with some practical classroom applications, are intended as an introduction to an ever widening range of knowledge and experience to be gained from the arts of speech formation, eurythmy, astrosophy and astronomy.

Note: The Motto for the constellations is from the lecture cycle "*The Mysteries of the Kingdom of Heaven in Parable and True Form*," given by Rudolf Steiner, Cologne 1912.

The dates given in the text are those corresponding to the astronomical times of the sun's entry into the constellation. The dates given with the illustrations correspond to the working of the forces from the constellation as assigned by Rudolf Steiner for the year 1912 – 1913.

# *Chapter Five*
# *The Consonants and the Zodiac*

"The sounds themselves are our teachers. It is only a matter of knowing how to engage their help. If we have once understood this, then that will mean that the several parts of our organism of throat and mouth have been received as pupils into the school of sounds. The sounds are verily the gods from whom we are to learn how to form our speaking."

Rudolf Steiner, *Speech and Drama Course* p. 384

The connection of the human body with the zodiacal constellations has been part of human knowledge all through the cultural epochs of human development. By the time of Christ this knowledge had been released from the mystery centres, where it had been guarded, and became part of everyday knowledge. An echo of this connection of man with the constellations is found in the use of the zodiacal symbols in cathedral sculptures, in alchemy and medieval secular life. This connection was so commonly assumed that Shakespeare could joke about it and know he would get a laugh:

Sir Andrew Aguecheek – Shall we set about some revels?

Sir Toby Belch – What shall we do else? Were we not born under Taurus?

Sir Andrew A. – Taurus? That's sides and heart.

Sir Toby B. – No, Sir, it is legs and sides. Let me see thee caper. Ha! Higher! ha, ha! – Excellent! – Exeunt

Act 1, Scene III, *Twelfth Night*

The Elizabethan audience knew that both gentlemen were wrong, as the larynx belongs to Taurus. Today this will only produce a smile from those who know the relationship of the parts of the body to the signs of the Zodiac.

The meditation on Twelvefold Man pictured in the zodiac leads us into his bodily structuring by the twelve senses and, ultimately, to the sounds of the consonants. "Speech does not come from the ego of man but from the astral organization. Hence we study the single sound." – Rudolf Steiner. These are the sounds spoken by the Hierarchies in their individual forms which, when sounding together, produce the Word that is Man in his archetypal being.

This concept appears in its highest reality in the opening meditational verses of the Gospel of St John... "In the beginning was the Word". Whatever comes from zodiacal forces works into matter. Therefore, in studying each consonant as an archetype we can begin to intuit how it works as a formative force fashioning each part of the body. The formative forces that are activated through the zodiacal powers can be helped or hindered in their activity by our speaking.

An attempt to characterize aspects of the consonants from a pedagogical viewpoint will now follow. Logically we would start from the head and work our way to the feet, but instead we will group them according to the elements and to other contrasting factors.

"In the sounds of speech live Divine Beings! and we must approach these Beings with devotion, with prayerful devotion. They will then be the very best teachers we could possibly have."[1]

♑ L

January 5th
February 8th

# *L*
## *Capricorn - The Goat*

January 19th – February 14th

*Motto - Man illumines the Soul*

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O! Lily Lady, dreaming serenely alone
In cloudy garden shady.

Anon

Notice how this sound is made, the tongue raises itself to the back of the upper teeth, the air flows through the passage on either side as if they were two nostrils, the sound is vocalized and then the tongue falls back into its water bed in the lower jaw. This is the motion of a wave on the sea shore. It is easy to understand how this consonant belongs to the element of water, which is the basis for our life forces that are bestowed on us through our ether body. Yet this sound does not dissolve away into emptiness, but has its harder side, just as the wave has when it meets the shore.

This is pictured in the zodiacal symbol of the Goat-Fish. The Goat has its horns but the legs have dissolved away into a spiral shell tail. The goat is a creature which devours everything it can get its teeth into, rather like water which eddies and swirls into every cranny hollowing out a path for itself; but the goat can balance on the tiniest area and from it leap to another pinnacle, just as our tongue can contract and hit against the hard palate as we form this sound. Water can be alive and flowing and can also be dank and stagnant. This sound, too, can swing between extremes.

Listen to how it is used when we are speaking. Is it fully sounded, quickly, lightly urging the word along, or does it drop down and lose its vitality emerging as a W in the word?

"May I have a drink of cowd water?"
"Can I visit you in the faw?" "Awright."

In many words we hear this cramped and hardened sound instead of L.

"Alone and palely loitering"

Try repeating this line of Keats sounding each L clearly and it will counteract such habits in the speaking of L.

L is not a true consonant as it contains a dissolving as well as the formative element of the consonant. Steiner characterised it as a sound "swinging in the element of life," "a force relationship between man's limbs and the earth."

With this in mind let us look at children in the playground, in eurythmy lessons and sitting at their desks. We shall see some children with feet that do not seem to lift themselves from the ground as they run, that in walking the feet drag over the floor, and legs that hang limply from the thighs which are perched on the edge of the chair. The feet are very probably turned inwards when sitting, resting on their outer edges. Listen to the speaking of these children. Do they sound the L clearly in words in a lively way? Very often they do not. Listen to the articulation of the mother: a well-pronounced L is often weak or missing. L is the sound which lifts us out of gravity. In leaping we use the limbs to balance ourselves in the vertical. In running we move the limbs to establish a balance between ourselves and gravity. We can aid the formative forces of the children, particularly before the change of teeth, by our conscious articulation of this sound. In the class teacher period we can make verses and choose poems where this sound is at work. For example, these lovely lines from Charles Kingsley's *Water Babies* where Tom, on his way to work hears the song of the river as he walks along its bank in the early morning.

Clear and cool, clear and cool,
By laughing shallow and dreaming pool,
Cool and clear, cool and clear,
By shining shingle and foaming weir.
Under the crag where the ouzel sings
And the ivied wall where the church bell rings
Undefiled, for the undefiled;
Play by me, bathe in me, mother and child.

The knee is the part of the body related to the L. Here is the only break in the continuation of the body's bone structure. It is covered by the loosely lying knee cap. The knee is the area where the ether currents of the outer world enter into the individual currents of the human being's own ether body: any obstruction between those outer etheric forces and the individual ether body can cause the etheric forces to become materialised and produce physical symptoms (water on the knee) instead of a healthy ether force. A spiritual scientific fact like this can be made actual to us in certain medieval portraits of the Annunciation where the Madonna is kneeling, and directed to her knees are the rays from the Holy Spirit embodied in the Dove. The

point where inner and outer ether connect is also shown in the gesture of asking a boon, where the suppliant clasps the knee of the one he is asking for help.

So intimately is L connected with the life forces of earth and man that the colour from its constellation bathes us in the peach-blossom/magenta, the colour that imbues all living substance.

♉ R

May 1st
June 15th

# *R*

## *Taurus - The Bull*

May 13th – June 19th

*Motto - Man absorbs the life of the surrounding world*

I am the rider of the wind,
The stirrer of the storm;
The hurricane I left behind
Is yet with lightning warm.

Byron characterises the essential elements of the sound R in these few lines – it is an air sound, it vibrates and is the mover of our astral body, just as L belongs to the ether body.

There are three forms of this sound, each made with a different part of the speech organs. The lip (labial) sound, where the air is blown between relaxed lips. This is one of the early speech activity signs in the baby as the air begins to mix with the water that flows over the lips. How children love this form of air blowing when they discover how to do it! This can keep them occupied for a long while.

Then there is the trilled R, made by the air passing over the tongue so that it vibrates as in gr-r-ruesome, the vibrating R gives one the shivers. A healthy tongue is needed to make this sound.

The third, not emphasised so much in the English language is the gutteral throat R made by the root of the tongue and soft palate 'gargling' together.

As the soul has a threefold membering in the astral body in thinking, feeling and willing, so is this mirrored in the three forms of the sound R, which is the manifestation of the soul in the airy element, its true body. Therefore R must be carried, swept along by the breath as leaves are swept in the wind in the autumn.

Radiant sister of the day
Awake, arise and come away!

Shelley

Unhappily, in the English language this sound is rarely given its full pronunciation. So many are the boisterous winds and gales around our coast that we have anchored this trilling, wind sound to a vowel and the weight of the watery tongue, lest our soul should be swept away in wild enthusiasms, soul extremes we so deplore in others. We are each Prospero in relation to this airy sound, anchoring it to serve the other sounds as Prospero chained Ariel to his will. We have to listen carefully to hear whether it is an r or vowel that is being said – father – farther – law – lord – harper.

To free our tongue, and thereby our soul, from the weight of the

physical body, we need to be able to "trill" our R's. Anyone who cannot do this needs to exercise the tongue as a muscle with the sounds N D T L in the following way, emphasising each sound as below.

*N* D T L

N *D* T L

N D *T* L

N D T *L*

*N* etcetera.

The tongue has to leap, contract and press against the teeth, a real awakening exercise which needs practising every day for ten minutes. One day the breath passing over it will cause it to vibrate – a moment of wonder and surprise. How has it happened? In order to aid this long process, which can take over three months hard work, we can begin our exercise by washing the mouth out with sweetened water. Sweetness has the power to lighten the effect of the physical body, taking away the feeling of weight. The implications of this needs pondering: the constant sweet eating of children today, the over-sweetness of food. The taste of sweetness reminds one of heaven-manna – sweet, sweetheart – words that recall our connection with the spiritual world. The English had to lose this connection for a time to establish the consciousness soul and master the earth; a consequence of this is a heavy tongue that does not trill the R.

Steiner has said that this sound is not a true consonant, but a rolling sound, where the breath is divided into small particles and activated from outside. (The breath is not vocalized.)

This is a characteristic of The Bull, its zodiacal symbol. The bull stands and suddenly rushes forward, impelled by something it sees. All its power is concentrated in its head and shoulders, and from its larynx comes the bellow that sets us running fast for the nearest gate. So, too, is R, connected in man with the central speech organ, the larynx, whose vibrating cords make sounds audible. As suddenly the bull rushes forward, just as suddenly can he be brought to a standstill from outside. Once the air is used up, the sound stops.

It is the sound that brings about harmony and balance in the soul.

This is seen in the colour orange that radiates from the constellation of The Bull. In orange, the red is arrested for a moment and the expanding yellow held back; we come to a standstill and are given the opportunity to collect ourselves. It is required also in the motto for this time. Wherever there is a one-sided activity then the practice of this sound will restore harmony. People who have to type all day can be greatly helped by practising speech sequences with recurring R's making sure that they are 'trilled' properly.

This is the sound which is connected particularly with the arms and hands. If we trill R energetically we can feel it continuing into the muscles of our arms. Look at children's arms, are they unformed, weak, giving a feeling of no substance; and the upper arms, are they held limply or too tightly to the body? Can these children 'trill' the R? This sound is a must for every child to be able to make so that the soul can feel freedom in his physical body. No child should reach class 3 without being able to 'trill' his R. How can the soul be free and in harmony with the rhythmical system that is to carry him into the golden years of childhood if this sound is not freed from the weight of the bodily structure under his control?

R is a sound which can be of great assistance to teachers in establishing discipline. How often do we give an instruction that washes over the children like 'water off a duck's back!' If we want our speech to become effective, so that meaning penetrates it, Steiner says we should combine the sound R with the blown sounds. So instead of raising our voice to make instruction penetrate, it would be better to practise daily at home such a sound sequence as:

Rah, raise, race,
rush, ruse, ruth, review, roof!

♏ S

November 10th
November 30th

# *S*

# *Scorpio - The Scorpion*

November 19th – December 18th

*Motto - Man grasps the life forces in earthly matter*

Having looked at two sounds that are not fully representative of the forming activity of the consonant, let us look at the one that is the consonant of consonants, the sound that penetrates deepest into matter and forms it S.

This is a sound scattered through every sentence we utter. In poetry a line without this consonant lifts the consciousness away from a forming activity to one that is more contemplative or dreamy:

> At the top of the house the apples are laid in rows
> And the skylight lets the moonlight in, and those
> Apples are deep-sea-apples of green. There goes
> A cloud on the moon in the Autumn night.
>
> J Drinkwater

The S delineates, forms pictures, points out, creates a mood of mystery. Concentrated activity is required on the part of the speech organs to produce it. The teeth must meet evenly, upper and lower poised upon each other. The lips have to be withdrawn by muscular activity. The tongue must lie low in the cavity of the mouth, out of the way of the air being breathed across it from the opened soft palate to the blocking teeth, where it hisses as it is forced through them into the outer air.[2] Is it any wonder that a long sibilant S will call a noisy class to attention, so penetrating is this sound?

Scorpio is the constellation from which the forces of S pour down upon the earth, penetrating into matter and forming it. Lilac is the colour of the constellation, a colour through which we can experience the life forces in space. Of all the zodiacal signs this is the only one to have a double symbol. The Eagle-Scorpion. What does this mean?

The eagle is a bird which can, through its own power, fly higher than any other bird. It stays away from other birds, taking hill and mountain for its habitat, living farther from the surface of the earth than all other birds. Its eye is so strong that it can gaze into the sun; from a great height it can sweep the horizon, yet pick out the tiniest movement below and pounce directly on its prey.

"And like a thunderbolt he falls" says Tennyson who graphically catches the essence of "eaglehood" in a few lines.

The bird kingdom is all head. In man's head the thinking activity has all the attributes of the eagle capacity, it can soar to lofty spiritual heights where the highest wisdom can bring to birth spiritual love for the whole universe. We see its epitome in the Gospel of St John, whose

symbol is the eagle. Thinking in man, however, has undergone the fall and the symbol has changed from the soaring eagle to the earth-bound Scorpion which fixes its prey with a glaring eye, wielding its sting over its back to paralyse and then kill it. Just so has a thinking developed which is bonded to the material world, a thinking which kills the spiritual, and the love which could be born out of spiritual understanding has degenerated into passion. Just as thinking is reproduced by the head so is the physical man reproduced by the organs of reproduction which are formed by this constellation.

We see the twofold possibility of the working of S in matter: if the substance can reveal the purity of the being, of the thought which forms it, there is beauty, but if the origin of the forming principal is hidden, so that the substance is no longer 'informed', then there is ugliness. In the potter's art we can see this easily. There are bowls and bowls. Some look lumpy and heavy; in others the proportion, depth, density and shape are just right. In its form we see purpose and symbol portrayed as unity. We recognise it as beautiful.

When producing the sound S the muscles around the lips are active. In the *Speech and Drama Course* (p.380), Steiner calls our attention to the lips. He points out that:-

"In the muscles of the lower lip we have an intense concentration of our karma. The forces that work and weave throughout the lower limbs go streaming through the muscles of the lower lip in a wonderful variety of movement. The whole human being, with the exception of the head, comes to expression in the activity of the lower lip. The upper lip provides the opportunity for what is contained in the head organization to find its way into the muscular system."

Picture now the head, the bearer of the formative forces, and how these have to work upon the body during the first seven years. Call to mind that from an evolutionary point of view the head is the earth with all its karma, and the body, the renewed cosmos into which the results of our past incarnations have to flow: and we can understand how our speaking can aid or lethargise this process. Do we pay enough attention to the way the lips move, do we notice the lisp that avoids this forming S? We need to be careful when we decide to remedy a deficient S sound formation in the child. S leads the soul into matter. Is the absence of the sibilant a protection from being too deeply enmeshed in the body, or an escape from taking hold of the necessary

forming process? From such consideration of the spiritual facts and observation our pedagogical practice can be enhanced.

Even the written symbol S speaks of the powers working in the sound. It is open above on the right side and open below on the left. With a little imagination we can see this as the profile of the face looking towards the left. We know from Steiner's research that although the back of the skull is shut off from the outer environment, seen spiritually it is open to forces streaming into the head from the spiritual world. The lower part of the face has the mobile jaw which sometimes recedes or sometimes protrudes. When the jaw recedes there is the tendency to live in and recall the past in thinking activity, contemplation is stronger than reaction to the moment. Such people find it difficult to seize the right moment for action. When the jaw is prominent and thrusts forward, as it often does with age, then the person lives very actively in the present and tends to act towards the future without sufficient thought. Here the impulse is dominant, a living more towards the future and anticipating it.

In speaking and working with the forces of S the two jaws come into balance and in time, with the mastery of this sound, objectivity can lead the soul to be able to act out of knowledge from the past at the right moment in the present, so that the future can be formed constructively.

♂ KG

December 1st
January 4th

# *K G*

## *Sagittarius - The Archer*

December 19th – January 18th

*Motto - Man looks upon the astral sheath of the Earth*

This sign belongs to the winter solstice, the time of the inner re-birth, the awakening of the ego in man which is offered to us at this season. It is not surprising, therefore, that from this constellation come two powerful sounds which support our will – K G.

K belongs to the group of aspirated sounds and is produced by the soft palate holding back the air and then relaxing to force out the breath. The activity of K is that of striking downward and springing up from the force with which it has contacted the obstruction, like the bouncing of a ball.

The palated sounds K G Ng Ch work deeply into the human organism, right into the ether body. They are sounds that our will forces need. The effect of these consonants shows in the strength of the tread on the heel of the foot. Pick up the shoes in the school cloakroom and see how the leather on the heels are used: a firm tread will leave them slightly worn at the centre back of the heel. A tread that has succumbed to the instinctive habit life of the environment will be worn over at the edges, showing that the K G is not working into the ether body sufficiently to support the ego.

These sounds used to be the final ones the child acquired when learning to speak, showing a harmonious sequence in the stages of incarnation. Nowadays they come too early, often through the word 'car', the hardening K taking precedence over the softer, gentler B and M. Here we see the impact of mechanization on the young child, with its duplication of the human voice in toys, TV and video, to which children are exposed far too soon. The soul is pushed too strongly into the ether body which has a hardening effect on it. And so we have children in the class teaching period whose astral body has been unable to imprint itself properly onto the ether body. They run all their sentences together, a stream of words gushes out and when they write there is not a full stop to be seen anywhere!

We can now use the K in its rightful sphere by putting it into rhyming couplets or alliterative sentences. If these are spoken regularly each morning by such children during 'individual exercise' time, it will bring about a marked improvement and the class will enjoy the explosive halting element imposed on the rushing words. The consonant can also be emphasised by the child stopping whenever it occurs. G, too, can be used in this way, which softens the impact. It is made by the palate and tongue pressing together with equal strength. The character of the sound is in the pressure and not in the force of the breath behind it. This gives it the gesture of pushing aside. When it is

combined with R it can become mysterious, even sinister.

> "Three grey geese in a green field grazing.
> Grey were the geese and green was the grazing"

A useful sound combination if we want to introduce a little drama into a remedial verse a particular child may need.

It is the Archer which sends us the K G. In the activity of shooting an arrow we have a picture of pure ego activity. The archer fixes his aim on some particular spot and then lets his arrow fly to it. His full conscious activity is projected ahead of him, and it is as if the arrow is drawn by an invisible force to the spot where his consciousness is. In this activity the archer is unconscious of the part played by the physical body. This is also a picture of the activity of our ego, our whole consciousness is directed to some aim and this draws the physical body to it. A working of the ego from the periphery to the centre.

This constellation forms the thigh, the region between the hip and knee that enables us to leap and spring, to thrust forward.

It is the ego in the arrow of thought that brings about transformation right into the constitution of man. Through the grace of the Christ, Steiner tells us, we do not appear to each other in the sense world in the form we have in the ethereal world as part of nature. There our body appears in its fallen form, that of the dragon. In the mystery plays of Rudolf Steiner, Johannes Thomasius experiences this in his meditations that lead him into contact with the elemental kingdom. It is the Michaelic thinking in us that subdues and transforms the dragon forces.

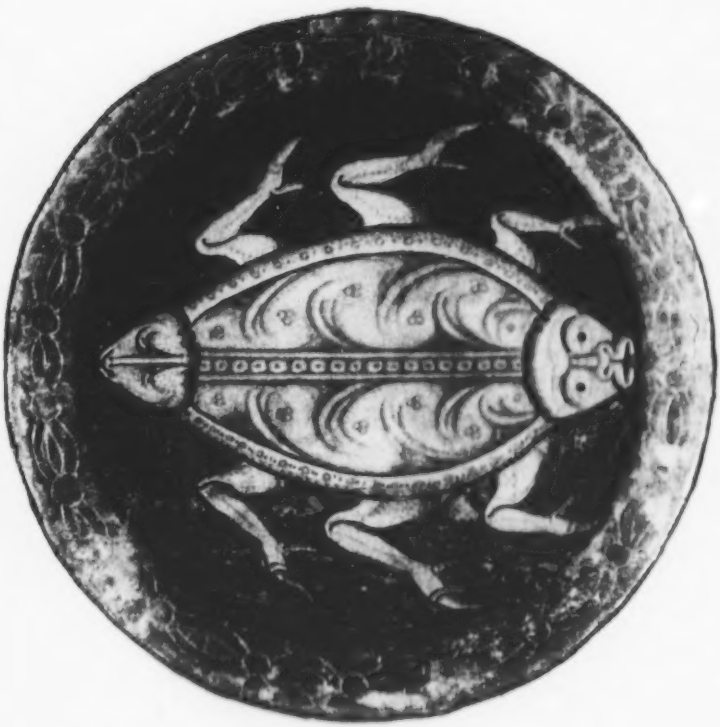
In the winter season the Archer's ego activity sounds to us in the beautiful rose-lilac of this constellation, as we enter deeply into contact with the body of the earth. In doing this we perceive the light of that Ego which, united with our soul, is transforming us and the world in which we live.

(9) F

July 21st -
August 3rd

# *F*

## *Cancer - The Crab*



July 19th – August 20th

*Motto - Man seeks to become one with what is new*

The Crab's sound F stands opposite to Capricorn's watery L in the circle of the zodiac.

F is a short, sharp sound which flies away on spurts of breath. The upper teeth lodge on the lower lip impeding the breath as it is pressed out from the diaphragm. So much strength and air is needed for this sound that we can feel the muscle of the diaphragm being engaged in its production. We can easily understand why this belongs to the blown sounds. F helps us to rid ourselves of, to expel any stagnant air that may be lying unused in the lungs. In making this sound the breath is directed to a specific point and completely separates from the creating organism to proceed independently to the spot at which it is directed. It requires intense activity in its production and has a swift fiery character.

In Michael Angelo's painting of the creation of Adam, we see the archetype of this sound. God breathes life into Adam so that he can be a living soul. God gives away part of his own breath in order for Adam to become an independent living being. In making the sound F, the breath, once formed, leaves the creator and proceeds independently, the creator having no further control over it.

The movement of breath is: in, out, in, out. Air has the characteristic of expanding horizontally and uniting all. It is therefore the basis of social community life, the objective element that binds us together as humanity. Everyone lives on air. Life depends on it, we breathe it in and expel it again. The air you have breathed out, I breathe in. Air is quite selfless as an element, allowing itself to be shaped into any form. If I hold the air back, keep it inside of me, then in a subtle way I am robbing you of something that we should be sharing. This holding back works onto the soul, we take in but cannot respond to others. The dead air we keep in us becomes a barrier to full social participation. We start hiding within ourselves, our soul life begins to work too strongly into the physical body and a fertile ground for illness is prepared.

The fiery, flame-like F can be a purge for this retained breath, bringing warmth and movement to what has become lifeless and heavy. Hear how it flies:

> The fair breeze blew, the white foam flew
> The furrow followed free;
> We were the first that ever burst
> Into that silent sea
>
> S T Coleridge

It can with equal strength turn inwards through the weight of the L and M:

Full fathom five thy father lies.

W. Shakespeare

Like the waves curling on the sea shore in eddying tones of green, this colour flows from the constellation of the Crab. Its structure is mirrored in our rib cage that protects the delicate tissues of our lungs which absorb the life-giving power of the air.

In both the traditional and new form of the sign there is a two-way gesture: it winds in, then there is a gap before it uncurls itself. We have this gap, this pause in the interchange from one movement to the other in the ganglion of the muscles which contain the perceiving and sensing of movement of the nerves. Steiner tells us, from his spiritual scientific researches, that in this gap between the perceiving and the reaction to the perception the spiritual world penetrates us.

We have this same pause and interpenetration between the in-breathing and the outbreathing, between the end of one year and the beginning of the next, where the twelve nights of the Christmas season hold the balance of the winter solstice between December 25th and January 5th.

The same dynamic applies to Palm Sunday when Christ Jesus rode into Jerusalem on a donkey with its foal running beside it. The old ecstatic consciousness remaining from the past recognises Him, the new has yet to be born. (See: Steiner's lectures on the Gospel of St Matthew.) F, in the sign of Cancer, challenges us to go forward to develop the new spirit-consciousness that Autumn-Winter brings each year, or we fall back into longing for the past, for the youthful forces that are no longer there to support us.

Knowledge of breathing can make us observant of how the children in our care breathe. Some children hold on to the air they breathe which leads to a subtle form of faintness, of which a short attention span can be one manifestation. Those children who take in very little air and press out the breath have an underlying anxiety of soul. They are likely to have been under stress from too early an age, perhaps being given too much responsibility for a younger sibling. Even constantly being asked "What do you want to eat?" "Shall we go for a walk?" before the change of teeth can lead to tension and anxiety, for at that age the faculty of judgement and decision is not yet present.

Finding poems or making verses with the two aspects of the sound F, the flying out, and the penetrating inward gesture, can be of great help for children with these conditions.

♊ H

June 16th
July 20th

# *H*

## *Gemini - The Twins*

June 20th – July 18th

*Motto - Man surrenders himself to another world*

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This sound reaches us from the Constellation of The Twins and comes to us at the culmination of all the growth and movement and beauty of the Midsummer season. Nature, the expression of the Easter Spirit, has breathed itself out, is living in unity with the entire Cosmos.

The H is a sound in which all the air is expelled from the lungs by the hard contraction of the diaphragm. The breath should travel freely up through the larynx and come forth like a sheet of flame which rises upward. It should not in any way be formed during its passage from the lungs, or in the least restricted, but should emerge quite freely. There should be no tension in the muscles of the throat or around the mouth. The breath is not directed to any point, but emerges like the flare of a flame when a match is struck. It is the sound of ecstasy but comes without aim, or grasping of the soul on a higher level. Shelley's *Ode to the West Wind* is an example where a poem is expressed in the ecstatic mood of H, and we hear its sound repeated from stanza to stanza until the turning point where the d in the final word of the last two stanzas once more gives us anchorage.

The H has, like the sign of The Twins, a twofold character: it can either split our being, or lift us up to experience that sphere which lies between the Spiritual world and the earth, the sphere into which the activities of Spiritual Beings can shine, be reflected, but which is not yet the objective reality. Although through this sound we can be raised into the world of 'shine' or radiant reflections, there are dangers, as this is the realm in which Lucifer works. It is the sphere of illusion, of the lie – the 'true lie' that reflects the truth but is not it in its reality. This is the sphere from which inspiration can be taken for artistic creation in the physical world, it is the realm of the beautiful; without it there would be no incentive to strive towards the spirit, neither should we know anything of it.

> "Beauty is the shadow reflection of the Spirit in space."
>
> "Beauty becomes a living being through the plastic forces of the Spirit of the artist."
>
> Rudolf Steiner

With these two aphorisms Steiner poses the modern problem for art, whether it remains in the Lucifer element where no morality lives, or attains a Christian beauty that inspires morality.

In its positive form the H is that power which can fuse thinking and

willing together in the soul and bring about the birth of the ego. It is the force that lies behind the Mystical Wedding; this term means that thinking and willing have been welded together in the soul through the birth of the ego within it. This is pictured in the portraits of the Madonna holding the child in her arms, in the sphere of the heart in which the ego finds its birth place. Rudolf Steiner tells us that the forces from The Twins are those which set the planets to move in their orbits: we can understand why it has the power to lift us into a state of experience from which inspiration can come to us!

However, when it works negatively then it can split our thinking and willing apart so that they become separate entities, neither influencing nor controlling the other. This is very much a characteristic today when we talk about moral responsibility and, at the same time, refute it by our technical inventions and methods of work, disregarding their long term implications.

Then we have the other side, the earth-bound H as in Tennyson's *The Dying Year*:

> Heavily hangs the broad sunflower
> Over its grave i' the earth so chilly.
> Heavily hangs the hollyhock,
> Heavily hangs the tiger lily.

Children in our classrooms where the power of H is overwhelming them are those with the tendency to hysteria; this is a specific condition between the soul and the body where the soul cannot stop at the boundaries of the skin and unite harmoniously with the outer ether and physical environment, but pushes and pours through these boundaries spreading out into the environment so that it has to clutch at the souls in its vicinity for support.

Here the teacher has to take up the role of the ego, standing by the child and quietly insisting that the task the pupil finds so impossible can be done, but he himself must never intervene and actually do it for the child. An outer help is to be very strict in seeing that the child is tidy. The desk kept spick and span – no left-over snacks, books, pencils or crayons sprawled in its interior. Every day it must be inspected to see it is orderly. This is not easy, as untidiness is an expression of the child's outflowing soul problem; with girls it is the long untidy hair, with boys the trousers slipping down, shoe laces untied... nowadays it is more likely to be zips unclosed. We have to

see that long nails are cut and grubby damp hands are frequently washed.

These children are the ones who in class simply by doing nothing always create a turmoil around themselves, for their outflowing soul irritates and impinges on others. But their work is always beautiful; brightly coloured drawings, long, long interesting compositions. On paper they are the teacher's dream pupil, but in the reality of the classroom... Oh!

To help these children we need to call on the strongly forming S and K G which in the northern hemisphere work from those constellations that send their forces through the earth in winter time. It is interesting how often the H calls on S and K G to form and bind it from flying away – hush, shrub, sheet, hug.

This double aspect of the H is shown in the picture of the Twins. H is held together in traditional pictures by the Twins facing each other with their hands on the shoulder opposite them, the part of the body formed by its power.

In von Eckhardtstein's renewed symbol, the Twins stand facing us, enveloped in radiant yellow. The power of the ascending one has drawn us:

> To lofty summer heights... where,
> In time to come thou'lt know:
> A God did feel thee then.
>
> Week 10 Calendar of The Soul

His twin, who inclines to the earth, and the autumnal constellations, shows in his breast the form of the heart.

M

February 9th
March 8th

# *M*

## *Aquarius - The Waterman*

February 15th – March 10th

*Motto - Man is enlivened by the life stream of earthly forces*

'Mmmm', we say as we listen to the speaker, entering into his thoughts in agreement. This continuous sounding gives the M an affinity with the vowel sounds; it is like the doorway between vowels and consonants; like Ah or O, the M can be held as a continuous sound until our lungs are empty of breath. This consonant is made with the lips gently vibrating as the air presses against them and is vocalised in the larynx. It is a contemplative sound:

> And multitudinous billows
> Murmur at our feet
>
> P B Shelley

It indicates entry into the quality of sympathy. There is nothing compulsive or demanding in it; here is the intuitive element resting in thought. Mmm, we say, searching inside ourselves for the right response, the right thought.

This sound, embodying the quality of sympathy, is one that penetrates back into the spiritual word. The sound of devotion.

If we look for the character and gesture of this consonant in nature we find it in the elephant; with his great trunk he reaches out and tests what he will handle with the delicate fingers at the end of his 'nose'. The way he lifts this limb-like nose, pushing the invisible air away, makes the gesture of the M.

In our body this sound is centred in the shin. Our legs from the knees downwards are immersed in the ether body of the surrounding earth. We are wading in it, as we are when paddling on the beach enjoying the pressure of the waves on our legs as we walk into the sea. This is a very visible M gesture activity.

The constellation of the Waterman presses into man through the body of the earth and traditionally has been associated with the art of agriculture. Its forces flow in a reddish colour, similar to that of the emerging oak or rose leaves before the sunlight turns them green.

In the classroom we can use this sound to help children who mutter to have a more distinct articulation if we combine it with S. These are children who are often diffident and unsure of themselves and need to push through, to penetrate into their bodies, their thoughts, and language. The vibrating M will make them aware they have a skin to protect them but at the same time the S gives a resistance to push against, awakening a balance for the penetrating sympathy of the sound M.

In the early classes it is good if the teacher makes a verse or sentence with sounds that have a relationship to the child's temperament, using a character or incident from the story or legend content of the main lesson.

TD

August 4th
September 7th



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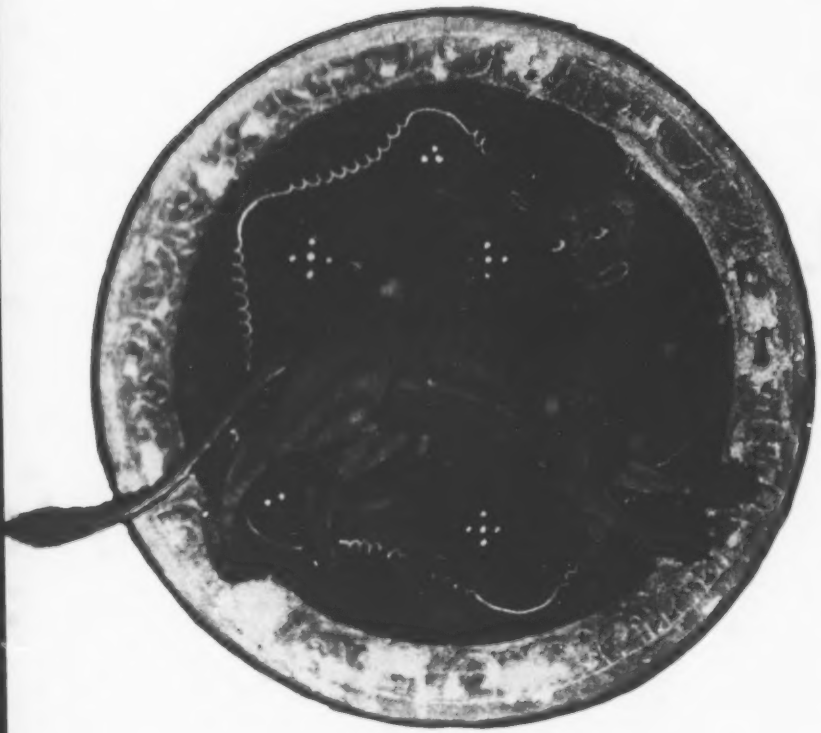
# *T D*

## *Leo - The Lion*



August 21st – September 14th

*Motto - The new spirit seed shows itself*

84

From the constellation of the Waterman we cross over the zodiacal circle to the late summer sign of the Lion. It is from here that the strong vital sound of T D resounds clothed in space-filling blue.

The T is an aspirated sound, meaning that the air escapes with the force of pressure behind it. The tongue's tip reaches up to the gum ridge, the place behind the upper teeth, presses against it and then is released with the air expelled by the diaphragm muscle. D does not have this force behind it, the tongue drops after the pressure against the gum ridge and the breath is used in vocalizing the sound. T D pressure, relaxation. We hear just such a pressure rhythm in the beat of the heart; the blood flowing to the periphery with the strong beat and the return of the devitalized blood with the light beat. From this constellation the forces come which lie behind the creation of this organ. Leo, The Lion – is he not a picture of the heart beat? All his power is concentrated in the thorax, his huge head swings slightly from side to side with the impulses coming from the strong blood circulation, the gaze of the eye is steady and he can spring! From a standstill he can leap upon his prey. T D and his dinner is between his paws! The fact that he kills only to eat adds dignity to this mighty creature, recognised as the King of the animals.

The T, D, sounds are ones which exercise the tongue, the soul of the speech organs, they awaken the sleepy tongue, discipline the lazy tongue, slim the fat, spreading tongue that overlaps its boundaries. We have to bring will and consciousnes into activity to arouse this soul organ. T.T.T.D. T.T.T.D. D.T.T.T. – these sounds penetrate the tip of the tongue. Nowadays many children have lazy tongues. The soul does not want to enter the physical body. It's like putting on a glove and not pushing your hand right in to the fingertips. T is the sound that wants to penetrate in from the top of our heads to the ends of our toes. It wants to help us complete the process of entering into our physical body.

In a language where there are aspirated sounds, a vessel is offered into which the Beings who guide the language can pour Inspirations.

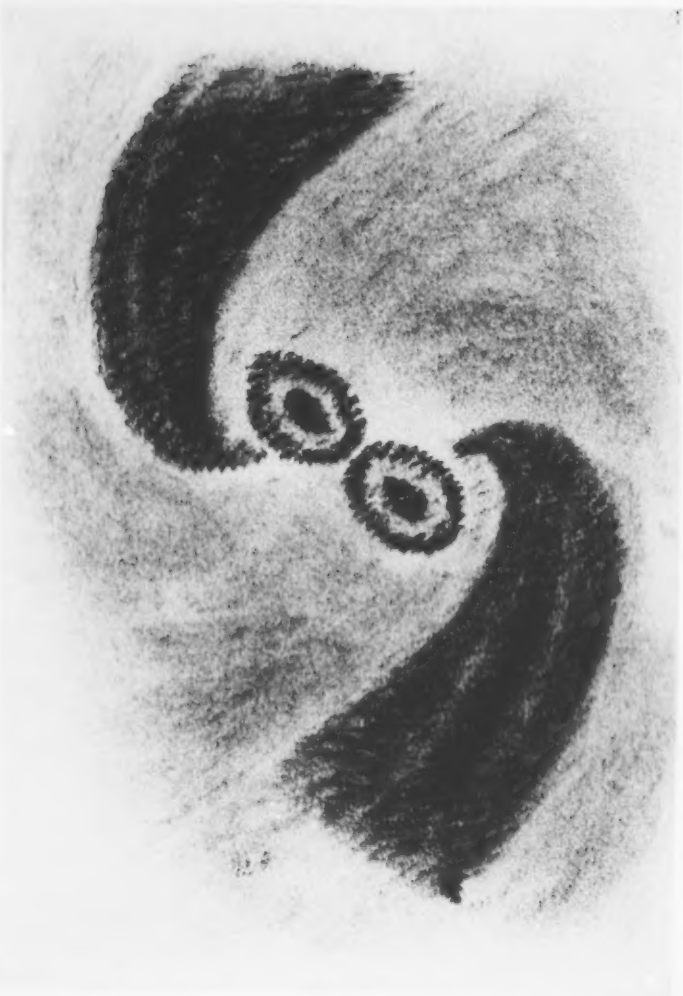
The activity of the T is like lightning which comes when the air is charged with electrical activity; we do not know where it will flash forth, suddenly it comes, touching an object and disappearing, leaving what it has touched completely changed. So it is with the T which plunges into a word, touches and is gone again. This is the sound connected with the faculty of Inspiration, of the spirit penetrating into matter.

Tiger, tiger burning bright
In the forests of the night.
What immortal hand or eye
Dare frame thy fearful symmetry?

William Blake

Most words ending in D in English or Dutch arose out of T in the German language. God – Gott. Good – Gut. Door – Ture. Dream – Traum. English and Dutch are languages of the soul. The soul observes and thinks about the world from outside, whereas in the German language the spirit wants to become one with the inner activity of the object.

In such subtle nuances we see how the guiding spirits of a nation cultivate certain qualities in the native through the activity of the sounds of his language.



♓ N

March 9th
April 13th

# *N*
# *Pisces - The Fishes*

March 11th – April 18th

*Motto - Man recognises the Spiritual World*

Like T D L the sound of N is also a dental sound, as it occurs when the tongue meets the gum ridge and springs back, and is vocalized; like the lid of a box flying open when the spring is released.

This element of touch and release clearly expresses the antipathy force which is embodied in this sound: No... nothing, not. The sound tallies with the quality of rejection in the words. It has the power of separation, of discrimination working in it, and, when accompanied by the kick in the K sound it works against congestion in conditions like adenoids.

"Cockney, look not, seek no nick names,"

This is a combination of sounds which Steiner has suggested for this condition. He has also advised it as a sound that can be used in alliterative sentences or verses with suitable content to help children overcome the egoistic: "No, you can't borrow my new crayons." – "I'm *not* going to invite *you* to my party". We hear the little egoistic antipathy in such remarks and attitudes between children. The N sound guards against these settling and hardening in the ether body and then fixing into prejudice in the instincts of the physical body. These attitudes keep the soul from recognising the forces of destiny leading them towards the fulfilment of the tasks of life.

It is our feet that lead us, unconsciously often, towards our karma, our destiny. And it is our feet which embody the impulse and gesture of the sound N. We have to develop the power of antipathy through engaging our forces with the Earth, treading on it in order to move from one place to another. Here antipathy is at its legitimate work, otherwise we would all be rooted to the spot!

N sounds to us from the deep rose-red glow of the constellation of The Fishes. It is the last of the five sounds which, from the cosmos, work on the human structure through the intervening body of the earth. Traditionally, this is the sign of the shipping merchant and the trader who travel the earth and, therefore, are strongly interwoven with the earth's watery ether realms. Its sign is the abbreviation of two ships cabled together. In the renewed form of the sign by Eckhardt-stein and Rudolf Steiner, we see two footprints with the ether currents flowing from them; one foot is on the earth and the other is stepping into the spiritual world.

The healthy working in the soul of the N consonant can awaken the power in us to distinguish what is working over from the past, asking

to be transformed into forces for the future. To awaken and grasp the moment of destiny is the message of the N.

Not I, not I, but the wind blows through me
A fine wind is blowing the new direction of time...
What is the knocking
What is the knocking at the door in the night?
It is somebody wants to do us harm,
No, no, it is the three strange angels,
Admit them, admit them.

D H Lawrence

♍ BP September 8th
October 12th



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*B P*

*Virgo - The Virgin*

September 15th – October 31st

*Motto - Man appears bearing the newborn*

This constellation is the longest of all those in the zodiacal circle. Its stars lie along the line of the ecliptic. The Sun moves through the entire length of the figure of the Virgin. She is bathed in the unusual colour of indigo, a colour which helps us to stay within ourselves, not to lose ourselves in space, but retain our own identity. It is the autumnal constellation when the fruits of the year's experience are drawn together as seed force for winter's maturing consciousness.

The sounds which come from the Virgin are B P, and these contrast in character and quality. Their formative power works in the activity of the solar plexus, the mysterious sun centre which oversees the processes of assimilation and of the sympathetic nervous system.

B sounds when lightly closed lips are pressed apart by the air. It calls on consciousness at the initial stage of its formation; we have to control the lips, gently resting them on each other, and then letting the sound fly out to take its own path into the wind. The gesture of the sound is that of separating the outside from the inside, by enclosing, separating a part from the whole. Man once lived at one with the surrounding world, he was one with the spirit. When the force of the B comes, then part of the spirit is separated from the whole and enclosed in the individual.

The archetypal B is the gesture of the Madonna. We see it in nature, in the sepals of the flower: this is the part which separates the forming bud from the outside, guarding it from wind and rain, allowing the flower to develop safely. It keeps the forces of growth and the forces of the elements in their rightful place.

Purity is the quality of the Virgin. Purity of soul means keeping forces in their right spheres and in proper harmony. Through the working of the power of the Virgin in the soul the Chymical Wedding between thinking, feeling and willing can take place. When there are insufficient forces of the sound B, then thinking, feeling and willing become uncontrolled, one penetrating into the other so that an unbalanced state in the soul life ensues. Exercises can help, Steiner says, when they are repeated one hundred times a day. Hysteria, for example, is a condition in which soul forces are out of balance. Exercises can help remedy this.

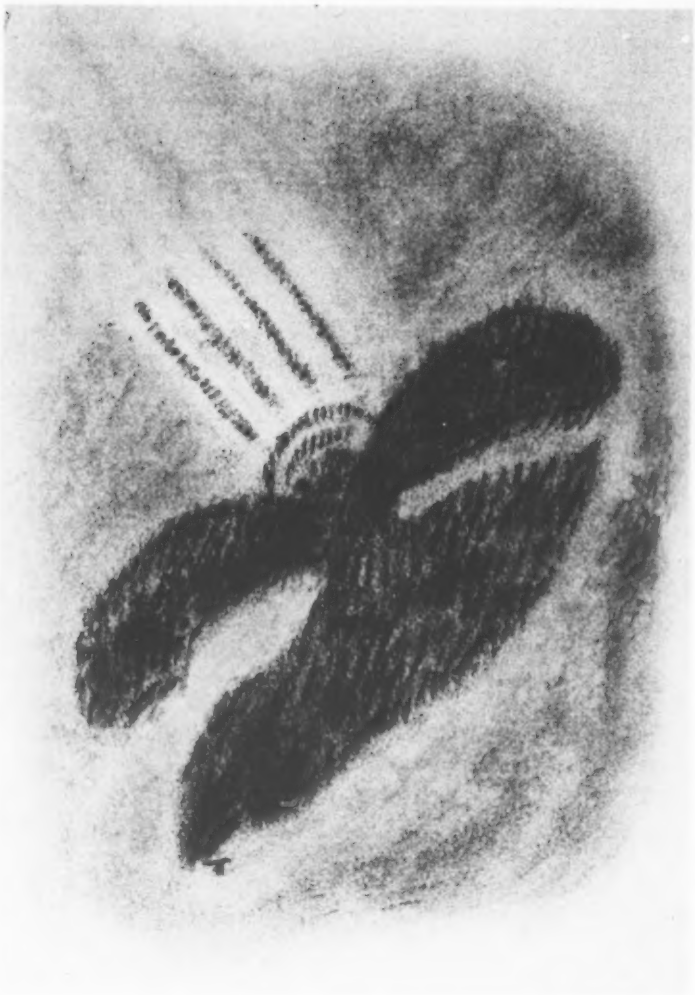
The covering element in the sound B can be of great help in correcting those high-pitched, squeaking voices which some children develop. The astral body is forcing itself too strongly into the head; they cannot yet control it, and so a speech habit appears that is distressing for the listener and subconsciously disturbs the develop-

ment of the child. Rhymes, verse, alliterative sequences, appropriate to their age, using B can work healthily here. This consonant can also be a help where the speaker allows the vowel sounds to obtrude and overwhelm the consonants, as in the English drawl. Over-emphasised vowels suggest an undisciplined soul life, untempered by the element of thinking, at the mercy of sympathies and antipathies.

P stands in contrast to the embracing protecting quality, the feminine side of this constellation. It is formed by the strong muscular pressure of the lips, and the exploding air makes it one of the aspirated sounds. Steiner suggests the sunflower is characteristic of this sound. The hollow stem produces an enormous calyx with its seeds exposed to the sun. The rim of flame-like petals are an image of the corona of the heavenly body to which it lifts its head. Here we see the imprint of the lofty power behind the creation of the material world, of that which lives as spirit in matter. Prince, pope, pomp are words that carry the outward thrusting force of this sound. On the other hand, when knowledge of their spiritual reality is lost and only the outer husk remains, then the P is found in words where there is only outward show, negative qualities such as pride, passion, prejudice.

The lovely story of St Elizabeth of Hungary shows us the character of these sounds.

Her husband, the duke, rules harshly, but she wishes to help those in need. The Duke forbids her to demean herself in this way, threatening death to those who show Christian charity which he hates. Elizabeth, determined to continue her good work, meets the Duke while carrying the forbidden bread beneath her cloak. The haughty Duke demands that she show her disobedience to his orders, but when she opens her cloak, the bread has turned to roses.



WV

April 14th
April 30th

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# *V W*

## *Aries - The Ram*

April 19th – May 12th

*Motto - Man beholding the spiritual world*

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The fiery vermilion streams from this constellation into the burgeoning life of the earth's spring time. From the warmth forces come the sounds V W.

At the beginning of his evolution man was mute and his mouth one with his alimentary tract. The warm breath passing over the moist dark enclosed surface of his mouth brought the first glimmer of consciousness and the indication that the spirit was taking hold of, and beginning to work in, the physical organism. This heralded the start of the penetration of the ego into the human body.

The V and W are made by holding the top teeth against the inner edge of the lower lip. The air vibrates between them, and its warm buzzing sound is like the bees at the entrance to their hive. In English the sound has two syllables, the warm vibrating V and the W where the lips are contracted into a tight rose shape and released, as in the word winter.

> The wind flapped loose, the wind was still,
> Shaken out dead from tree and hill:
> I had walked on at the wind's will –
> I sat now, for the wind was still.
>
> Dante Gabriel Rossetti

> The western wind was wild and dank with foam.
>
> Charles Kingsley

The repetition of the W brings the blood into the lips and warms them.

> All along the brimming river
> Little breezes dusk and shiver
>
> Alfred Lord Tennyson

Here the vibrating V is carried further by the R, the flow of water in the river.

In his childhood man is a deeply imitative being. Steiner describes how man learned to speak by imitating the different soul sounds of awe, wonder – U and O – as, guided by the tribal initiate, he watched the sunrise. He experienced the wind, the sound as it rushed through the forests, compelling his lips to round and contract, making the blood pulsate and warm them, of his own warm breath pushing

between teeth and lips, nudging him out of his dream consciousness.

Legends of the north picture the creation of man as a frozen form in the ice; the warm winds free him. As his consciousness develops so does he become aware of the gap between the tongue and the oesophagus, a drop into the deep dark abyss of the metabolic regions – an experience also mirrored in Gingungagap of the Northern mythologies.

In the wintry depths the elemental beings unite with the seeds on New Year's Eve and, from the forces of the sun-warmth stored in the earth, they fructify the seeds for the spring growth. Embodied in the W is this soft warm life-giving quality, which spreads out and has a continuous activity.

It is important to bring back the air, the wind's breath, into this sound whenever it is spelt in conjunction with H. The soul of these sounds has become sodden and saturated with weight and water. Once the mighty evolving push of H was alive in these words, now we say, "were, wat, wen, wich, wy."

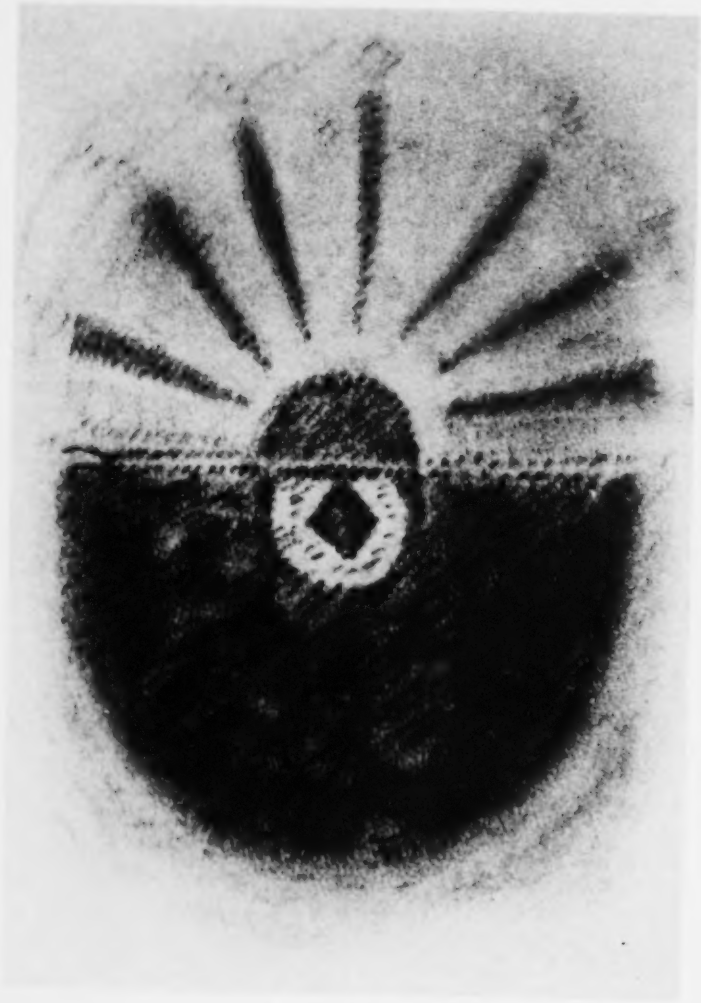
How children love it when we show them how to articulate the H and say "*wh*ich, w*h*at, w*h*en, w*h*ere, w*h*y!" These words have the activity of questioning, exploring in them. When we articulate the H we use the force that started the planets moving.

Whistle, whippet, whim, whirl, whisk, whoop...

In pronouncing this sound combination we have an aid in overcoming the modern apathy of soul with its dulled acceptance of what is there. It blows the fog out of the mind.

V and W sound to us from the Ram, the traditional constellation of spring: (the equinox has now progressed to the Fishes). The Ram stands looking with his head over his shoulder, emphasizing the brow, which this sound forms in man. The great curling horns, with their spiral twist, remind us that the astral body, the vehicle of consciousness, is now ready for man's use, penetrating his body, so that the "I am" can enter and direct him.

The red vermilion from this constellation spreads through space, calling the earth to show to the senses the results of her winter activities.



♎ ♐

October 13th
November 9th

BEST COPY AVAILABLE

*Tz*

*Libra - The Scales*

November 1st – 18th

*Motto - Man who perceives the mineral world*

BEST COPY AVAILABLE

Alone and warming his five wits
The white owl in the belfry sits

Alfred Lord Tennyson

From the other side of the zodiac gentle violet encloses the constellation of the Scales. The autumnal equinox has passed and the descent into the forces of the earth has begun.

It is the time of the year when we have to carry our outer experience into ourselves, to meditate and mature it, so that we can in consciousness receive the fruit and meaning of the earth and selfhood in midwinter, when the Ego of Mankind awakens in the earthly etherspace.

In lectures given in 1908 Rudolf Steiner explained how the planetary galaxy we are in will eventually reach the constellation of the Scales, where it will find the ultimate completion of its present evolution.

The formative power of Tz is connected with the hip. No exercises have been given for this mysterious sound. Steiner merely says it is the sound of health. Deep in our subconscious this awareness lies, as this Tz is heard when we sneeze. In Germany where health is cultivated and respected, people respond to a sneeze with the salutation "Gesundheit" – good health. In England we say "Bless you!" the Tz is a sound where the activity thrusts aside something which assails us and would submerge us.

When a person sneezes, then the heart beat and pulse are brought in connection again. Momentary disharmony in the physical body often produces a sneeze, after which harmony is restored.

König once characterized the early morning sneeze as a minor epileptic fit, the sneeze overcoming the initial resistance of the body to the penetration by the spirit.[2]

This penetration by the spirit is what speech *is*. It is the imprint in Man of the activity of the Godhead. God spake and creation began. Man speaks and has the possibility of becoming one who creates.

Let Rudolf Steiner's summarization of the activity of speech conclude these studies.

"In giving speech artistic shape and form the health, co-operation and harmonization of body, soul and spirit becomes manifest. The body shows whether it is able to incorporate the spirit correctly; the soul reveals whether the spirit lives in it truly; the spirit is vividly present working directly into the physical."[3]

Rudolf Steiner

# PART III

# *Biographical Note*
# *Imma von Eckhardtstein*

Imma von Eckhardtstein, whose renewal of the form of the signs of the Zodiac is mentioned in the following text, was born in Luneville, near Nancy on November 5th, 1871. She came into a family who had clairvoyant faculties in their ancestry. She was gifted with these faculties and was also artistic. At nineteen she went to study with the artist Josef Rolletscheck in Weimar. There she met Rudolf Steiner who was a friend of Rolletscheck. She became a member of Steiner's circle of pupils and accompanied him on his lecture tours. She was given the task of making the scenery and costumes for the first Mystery Play in Munich in 1911, and later worked on the paintings in the Great Cupola of the first Goetheanum. After Steiner's death, Marie Steiner asked her to be responsible for the scenery and costumes of the revival of the Mystery Dramas.

In 1911 Imma von Eckhardtstein asked Rudolf Steiner about the possibility of a Theosophical – Anthroposophical calendar that could be the expression of the Consciousness Soul. This question prompted their collaboration on what is known as the 1912-1913 calendar that incorporated the verses of the Calendar of the Soul.

Steiner gave Imma von Eckhardtstein private lessons in earth evolution and its relationship to inner training.

She was also asked to observe nature, and to make a picture of the sense world when the rising sun, or a planet is standing before a particular constellation. To let this picture of the visible world sink into the soul and then to listen and perceive in its depths the imagination arising, reflecting the spiritual activity behind the picture of the sense world.

From this exercise arose the new Zodiacal forms which she then worked over with Rudolf Steiner. These first motifs were painted on the colonnade of the meeting place of the Society, Stuttgart House, Landhausstrasse 70. (See illustration p13 *The Goetheanum - Rudolf*

*Steiner's Architectural Impulse*, by Hagan Klingborgh, Rudolf Steiner Press, London.)

After Imma von Eckhardtstein's death in 1930, Margot Rössler assumed responsibility for her work. She fostered this impulse, founding the Studienstätte für Kosmisch – Künstlerische Tierkreis Arbeit, Stuttgart. She herself has made an original contribution to this body of work in the metamorphosis of the Zodiacal forms, in which she depicts the earth standing before the constellations. (See – *Aus der Sprache des Tierkreises* Part II.)

Training courses and workshops are available at the above study centre.

The illustrations for the constellations are by Fiona Tweedale, a pupil of Margot Rössler.

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# *Introduction*
# *Motifs of the Twelve Constellations*

*Introductory Thoughts on the Motifs of the Twelve Constellations of the Sun-Zodiac*
Fiona Tweedale

"Art is drawn from the heavens and their interplay with the earth. True art is an expression of that which man experiences in the cosmos, spiritual-psychic and physical, which reveals itself to him in magnificent Imaginations...we can speak of a work of art only when it expresses human feeling in such a way that through it the soul is opened to the secrets of the Universe".

Rudolf Steiner, *Christmas Imagination* 1923

Although people are familiar with the conventional pictures of the Zodiac – Ram, Bull, Twins etc, the motifs accompanying the text of this book are so very different that they need a word of introduction. Instigated by Rudolf Steiner himself and carried out by the young artist Imma von Eckhardtstein and developed further by Margot Rössler over the last thirty years, they stand as an archetype of movement, colour and form which weaves from the Zodiac to Earth and to us human beings. Each cultural epoch has its own inner development leading to outer form and in our own epoch there must come about a new level of consciousness: the older forms are metamorphosed into the new. These new motifs are not in any way arbitrary – they only speak in so far as the 'secrets of the Universe' move through them, as the above quotation indicates.

In order to comprehend these motifs, it is important to remember that the 12 motifs were developed as a complete image of the soul's experience from the Zodiac through the course of the year, and that with it, Rudolf Steiner introduced the beginning of the soul-year not with Christmas and the Jesus-Child, but with Easter Day and the Christ-events on Golgotha and the resurrection, and moreover, that this should now be experienced with the Sun standing in the constellation of the Fishes (due to the precession of the Equinox); the Fishes are now the sign of the crossing of the threshold and show the two

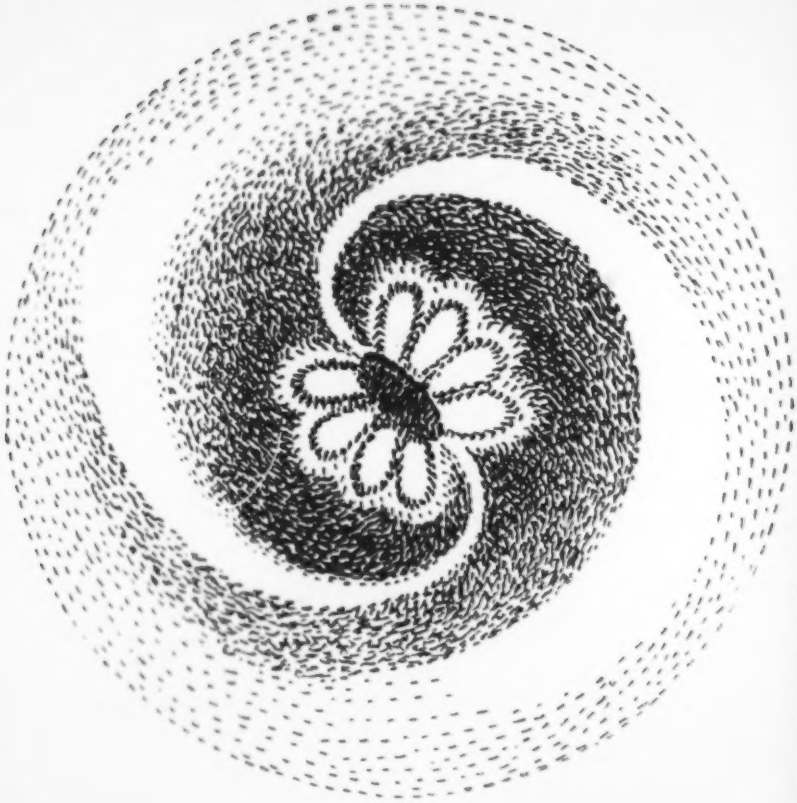
footsteps from earthly world to heavenly world – a step which mankind should now experience of expansion/contraction through the year. Physically speaking, month follows month and season follows season – a necessary sequence for daily life, and to be deeply aware of this is to experience an organic wholeness.

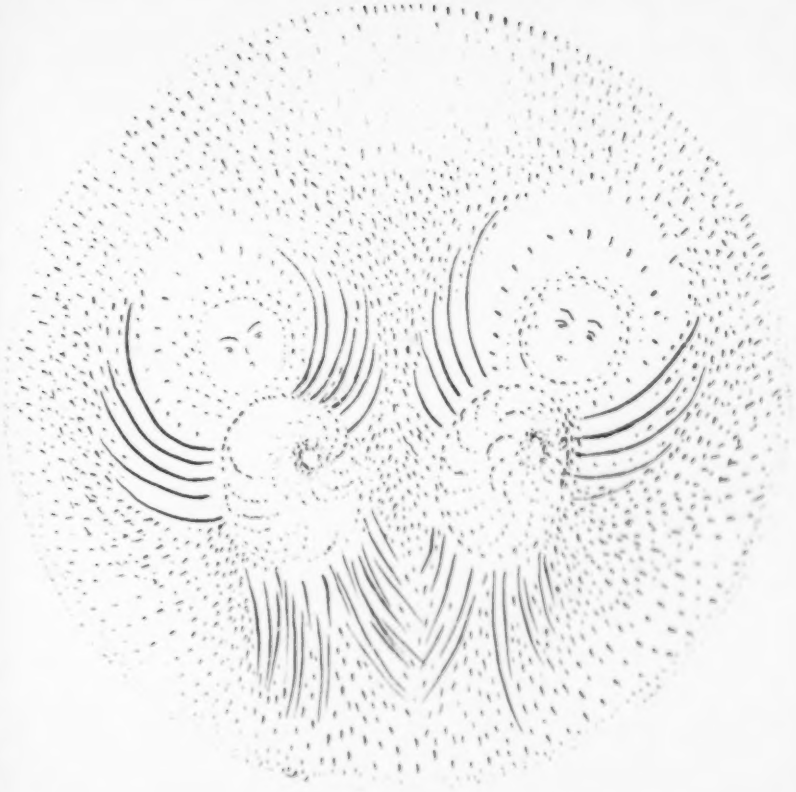
Yet, what is mediated to us from the Zodiac is basically a soul-experience whose effects work into the physical realm and therefore one may well take any one or another of the motifs and study them and experience them separately for specific purposes. Therefore, the studies in the text of this book do just that, so the sequence does not follow the course of the year but the course of the soundings of speech, carrying us deeply into the mysteries of sounds. The motifs and the sounds work together in a harmony, the parts being members of the whole organism. So, it is suggested that in order to fructify those studies more fully, one might first contemplate the motifs themselves as an organism following the soul's course of the year – Fishes, Ram, Bull, Twins, Crab, Lion, Virgin, Scales, Scorpion, Archer, Goat and Water-bearer – and so in this way one works from the whole to the part, even as is done in education in the learning process of arithmetic. In doing this, one can let the form speak in relation to 'before-and-afters'. Although the motifs are static in our three-dimensional world, they are but a moment frozen in time: they have come from a past and go towards a future and are in continual movement – hence their capacity for development.

As this is just an introduction to the motifs, detailed comment is not necessary but perhaps one aspect of observing them may be to become aware of a process in the motifs which runs through each of them like a golden thread. This process is concerned with the movement of form, viz. the differing directions in space. There is a diagonal direction in Fishes, Ram and Bull, running from the lower right to upper left and vice-versa, followed in the twins by a balance of two diagonal movements – lower right to upper left and lower left to upper right. In the Crab, the diagonal passes to lower left to upper right. The earlier diagonals are connected with a 'listening-in' to the spiritual world, while the Crab diagonal is more linked to a reverent receiving of the fire-seed of midsummer, conceived in the heavenly regions around the time of St John, from whence it must be carried earth-wards and offered as a sacrifice in earth-life. It is the active work of each human being to take on this task and carry it through the rest of the year. Therefore, after the Crab diagonal, the second part of the year con-

centrates on that direction in space indicative of the human being – the vertical. Through Lion and Virgin the vertical predominates; with Scales there is a balance between vertical and horizontal followed by the vertical in Scorpion and Archer and Goat and only in Water-bearer is there a beginning of dissolving the vertical experience in preparation for the new cycle in the Fishes, when there is a releasing from the weight and darkness of earth-winter and a listening diagonal and the expanding into the heavenly spheres in Spring and Summer.

To experience this sequence with the mottos for each motif will lead the soul to the very source from which the 'secrets of the Universe' and all true art should flow. Then, to contemplate the individual sounds and motifs as one will and, in the context of this book, in relation to speech, will yield true riches and wisdom.





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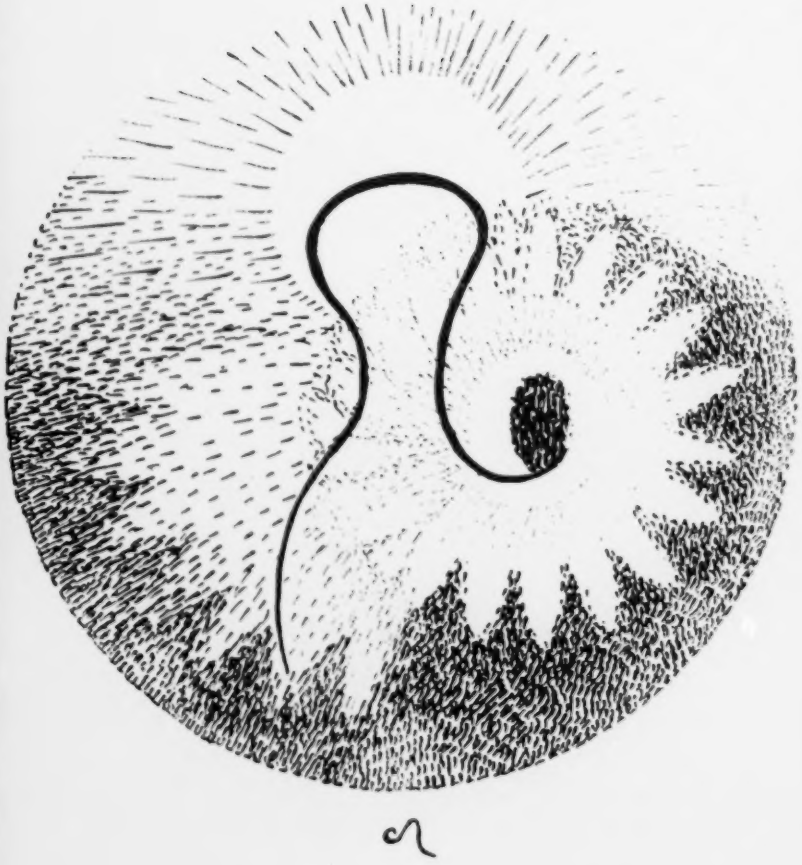

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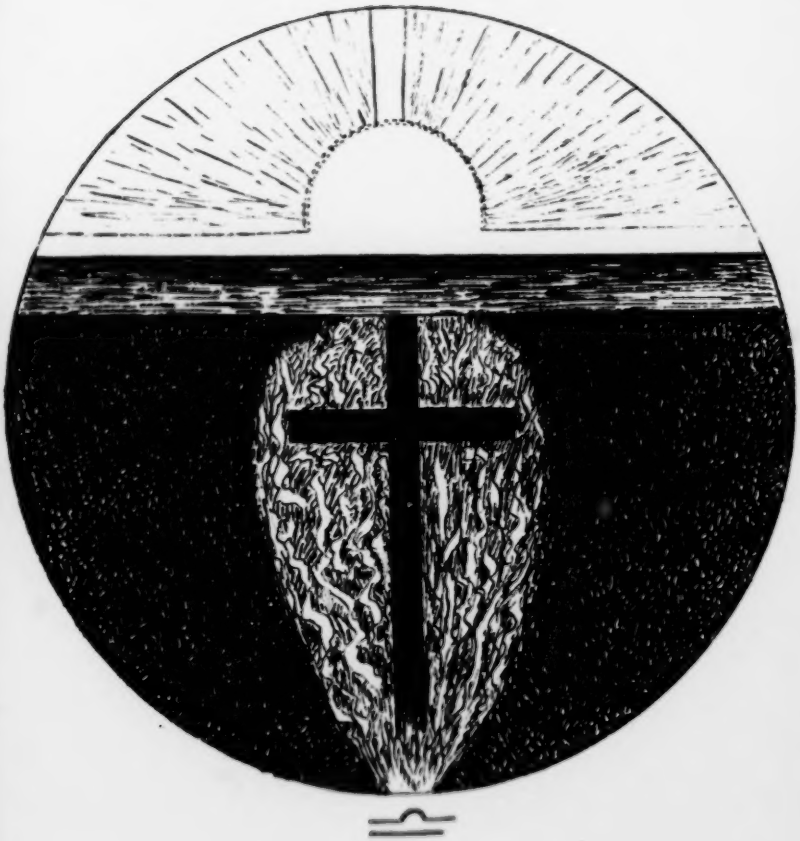

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# *Appendix*
# *Live Music and Recorded Sound*

*The Perception and Experience of Live Music and of Electronically Recorded Sound*
Norbert Visser

We are living at a time in which a greater part of the music we hear is electronically reproduced. If we were able to silence all the loudspeakers on earth for one day then, in comparison with other days, only a fraction of the volume of music would be heard.

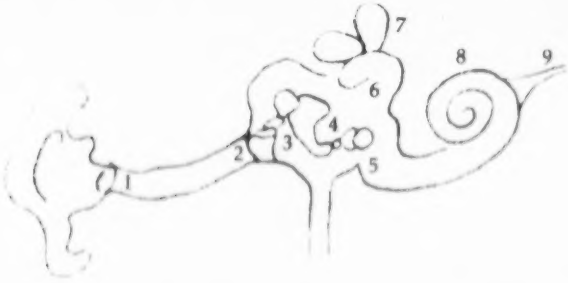
We can, of course, have the opinion that such a quantity of sound coming from loudspeakers which is heard in restaurants, on the street, in aeroplanes, at work, or even in one's own home, only acts as a kind of background noise. This opinion would certainly not lead to an awareness of the dangers which issue from such a quantity of electronic sound – for instance, a dulling of the musical sense or the confusion which is created in one's own inner faculties of perceptivity and experience. A judgement on this matter can only be formed after the phenomenon of electronic sound has yielded up its secret concerning the effect it produces on the listener. One thing, however, is plainly evident from the very start; the apparently universal avoidance of discussing this theme in so far as one would like to criticise the effect of electronic sound. The presence is so much taken for granted in all walks of life that such a discussion – or even a thorough study of it – meets with rejection: "That is how it has come about; there is nothing we can do about it. Let us rather be positive towards it!" And very often the conclusion is made: "Is it musically at all possible to discern the difference between what is directly played by a soloist and its reproduction on a record? Is not the only difference the fact that in one case the musician is present in person and in the other case not?" Independently of all such assertions as this we shall here concern ourselves with the question of how we are able to hear.

What perceptions and experiences can we have of the musical tone when viewed as a phenomenon? What differences become evident when we compare live music with electronically produced sound? – And we will only apply this concept 'live' to a direct perception of the

tone produced by a musical instrument, or respectively, by the human voice.

## *The Human Ear as an Organ of Perception*

The general picture is well known: somewhere a tone is sounded. The sound is transmitted through space by means of the air. Certain vibrations, caused by the sound, reach the outer ear passage (1). and come up against the ear-drum (2) which forms the inner end of the outer ear passage. On the other side of the ear-drum, in the middle-ear (3), the vibrations of the ear-drum are transmitted to the ossicles (malleus or hammer, incus or anvil, stapes or stirrup-bone)(4) which in turn send them to the ear mirror (foramen ovalis)(5) which is situated at the transition point between the middle – and inner-ear.




Two important organs are situated in the inner-ear: the semi-circular canals, which are the organs of balance (7) and the cochlea (8). The cochlea contains a fluid as well as a large number of small and minute hairs which 'receive' the vibrations which approach them from outside. One usually interprets this process by likening these little hairs of unequal length to the strings of a musical instrment which are caused to vibrate: a pianist, maybe, is playing out there on a grand piano. The vibrations reach our ears and finally arrive at the 'small piano' in the ear – the cochlea with its many little hairs. That is where the auditory nerve (9) takes it all up and conducts it to the brain. And thus we hear.

Looked at in this way it gives a wonderful picture. It is a marvellous structure! However, if one looks more closely at this picture, it presents us with a problem, for the wonderful image of the grand piano on the stage (11) and the little piano in the ear (8) certainly elucidates the question of how an outer sound can activate an inner sound, but is one thereby enabled to understand the process of hearing any better by means of the concept of hearing not only one piano outside, but a second piano within? What is the difference between the outer and the inner piano when both of them produce sound? Certainly, in the case of the 'small piano', there is the auditory nerve attached to it, which is not the case with the grand piano. But that of itself does not make the whole process more comprehensible. Added to that, in the case of the 'little piano', there is the long preparation by way of ear-drum, ossicles and ear-mirror; what purpose do they serve?

On closer inspection this picture of the hearing process proves to be incomplete. If we call the natural sciences of anatomy and acoustics to our aid, we shall discover a number of details – concerning, for instance, the acceleration of the vibrations, the nature of the mysterious fluid in the cochlea and the nature of the nerve activity, and also the place in the brain where the centre of hearing is situated. But the basic picture remains the same – the transmitting of vibrations and converting them into nerve activity – the large piano without and the 'little piano' within.

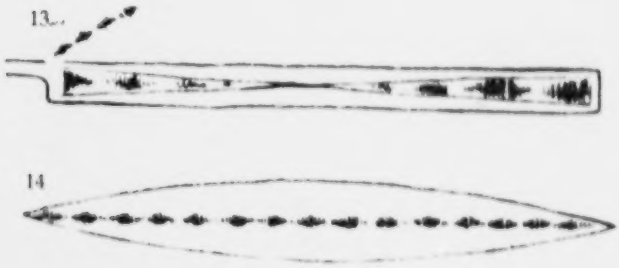
But then, perhaps, a question may arise: If the perception of the sound we hear is transformed within the ear, that can only be one half of a process which includes the production of the sound! If the 'little piano' so transforms the sound we hear that it can be inwardly experienced, then the big piano must perform a task whereby it makes audible what was formerly inaudible. That is the reverse process: the creation or production of sound – and we get the feeling: that is where

the real difference between the two pianos lies. The large piano produces the sound, the 'little piano' transforms the sound in such a way that it again becomes inaudible within us! For it is quite certain that there is no audible acoustic sound within the brain.

Let us examine the musical instrument to find how this reversed hearing process comes about. Surely phenomena will be revealed there which will enable us to understand the real hearing.

## *How the Tone becomes Audible*

In every musical instrument there is a certain place where the player initiates the process of tone formation. In the case of the recorder it is the mouthpiece with its lip or sill (13), with the clarinet it is the reed, with the violin the strings (14).




At first the small and minutest vibrations are set up and these then incite the whole instrument to create the tone.

If we were to blow very softly into the mouthpiece of a recorder, we would hear a number of high tones which vibrate very gently; they are scarcely audible. These minutest of notes correspond in a mysterious way to the "large" notes of the pipe as a whole and enable these to sound forth. Whatever instrument one chooses to play, this process always takes place: small, almost inaudible vibrations bring about the large well-audible vibrations.

Every musician ought really to develop a natural feeling for this as a matter of course. We are dealing here, actually, with the creation of the audible note, that is to say, with that process which makes a

musician into a musician! The creation of audible notes from inaudible sound is the goal of all those who wish to make music. And it is a pity that in the music schools and colleges the science of acoustics interposes with its explanations from physics which render this wonderful process of sound creation calculable to the finest degree. For as soon as we start to tie down these small and minute sounds we have described with such concepts as partials, natural tones, overtones, difference tones, etc: not only do most musicians switch off, but at the same time we make it impossible for the organic process of the creation of sound to be clearly understood. Instead we are merely explaining the mechanics of it and, surely, in a largely incorrect way as far as the actual hearing process is concerned.

Partials are certainly always formed, which in their turn create the so called keynote, which in every case is the lowest note of the column of air or the vibrating string. But in contra-distinction to what is described in many books on acoustics, these partials are not a subsidiary phenomenon to the keynote. "The keynote is always accompanied by partial tones" is how it is expressed. We discover that these partials form a sequence which is exactly calculable – the sequence of the overtones. By means of such sequences the science of acoustics is able to calculate the most beautiful series of combinations and thereby to create moods out of sound colours. But an important piece of knowledge is thereby overlooked: the fact that the so-called partials make their appearance *first*. The latter are the *cause* of audibility! They are not just *effect* or a mere secondary phenomenon.

This is a completely natural phenomenon. Life is full of such processes. Whoever has watched how a locomotive sets in motion a long train of carriages will understand it. It is good to watch such a chain as this when the locomotive is situated somewhere near the middle of the train. To see how it is first the locomotive which moves, then the carriages immediately in front and behind it, and only later the carriages right at the front and back ends of the train. It is thus that the violinist touches the strings with his bow; in the end it is 'the whole train' which moves.

Now we can put the question: how is it that we do not perceive this phenomenon of tone creation – for instance, where the violin is concerned? Every sound from the violin seems to sound forth in its full measure straight away when it is well played. In the first place, it is not very long before the whole string starts to vibrate (much more quickly than the railway train!). Secondly, the maker of the violin has

seen to it, in the setting on of the strings, that this amount of time is reduced to a minimum: the resonance chamber and the strings are attuned quite exactly to each other with this in mind; the sonority of the instrument predominates over the perception of sound. In spite of this we can become aware of this remarkable point-periphery-transmission if we concentrate on it. In the case of notes played on a piano this phenomenon is always present. And in the building of organs there are certain registers which make just such 'smallest vibrations' audible leading up to the keynote.

But we can experience something very special in connection with a train. If we are in a country district where there is a long stretch of railway line – the ground must indeed be firm and there must not be too many curves in the tracks – we can often hear a soft and high-pitched, light-imbued sound which disappears and comes back again while the train is still a long way off and out of sight. The track appears to vibrate freely. When the train approaches closer a slow rumbling begins which makes a deep sound. And when the train arrives everything seems to vibrate all at once: the track, the wheels and the earth.

With that a wonderful picture of sound-creation has been provided for us. At the time when the rails are sounding freely the note is high-pitched, light-imbued and delicate. The track is, of course, firmly fixed to the ground, but its quality as a metal allows it a great deal of freedom in the direction of its length. Then, when the heavy train comes, the whole of the surroundings rumble, the track is no longer free, everything seems to reverberate, the sound is strong and dark.

The real basic elements of sound production are revealed when the notes become audible in this way. The free vibration of the strings (the railway lines) is hardly audible and gives a radiant and high-pitched tone: the ground (sound board) rumbles for miles around, dark, dull and mighty. There are two elements, which are necessary to one another: the almost inaudible vibrations and the loudly reverberating resonance surface – the strings and the instrument.

## *The Musical Instrument and the Ear*

The actual vibration as such – one could call it the 'ideal vibration' (see N Visser: *Das Tongeheimnis der Materie*, Särna 1984 – The Sound Mystery of Matter) is inaudible. This fundamental truth has been

confirmed by many experiments carried out in instrument builders' workshops. Freely vibrating strings need a soundbox in order to become audible. This capacity of becoming audible is called resonance. Thereby the fundamental principle of acoustics has been defined. The sound is not caused by vibrations, as is often affirmed – even though one adds: "it is reinforced by resonance". The concept 'resonance' is thereby thought of merely as 'amplification'. But something which is inaudible cannot be 'amplified'! The basic law of acoustics should actually be expressed as follows: "The audible sound is generated *between two opposite poles of movement;*" the moment a resonance chamber or soundbox (15) meets a free floating vibration (as from the strings of a violin 16), a sound is born. It is the resistance of the soundbox which extinguishes the vibration – which 'kills' it, so to speak. And through the 'death' of the vibration what remains behind is taken up by the soundbox by virtue of its elasticity, and this 'new' vibration to the surroundings.

There are thus two kinds of vibration: the 'free floating vibration' and the 'resistance vibration' (resonance vibration). Both kinds of vibration are capable of being measured nowadays – albeit only according to a single method.

Let us now look again at the two pictures, the musical instrument and the ear. The instrument produces the audible sound in a sequence opposite to that of the ear:

In the musical instrument:

The sound is made audible through the qualities of the material; it is relayed to the surrounding air.

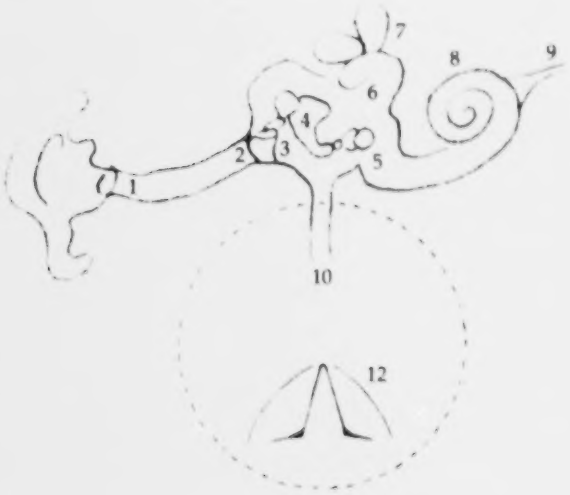
In the ear:

The sound is accepted from the surrounding air; it is made inaudible through the intensification of the pure vibrations.

As has already been mentioned, modern investigation has confir-

med the phenomenon of intensification, brought about during the relaying process in the middle and inner-ear. It is an intensification, however, which has nothing to do with mechanics, but is purely of an organic nature. The ultimate 'mechanics' of the ossicles of the inner-ear are transformed into organic perception.

In this way we ultimately discover how the polarity of musical instrument and ear is incorporated into the human being in its *totality*. The human voice, the larynx (12), in its capacity as musical instrument, forms a unity of this kind with the ear. Rudolf Steiner points emphatically to this unity when he includes the eustachian tubes (10) in the whole hearing process: these tubes, which connect the middle-ear (3) with the larynx, bring into unity our hearing organs with the musical instrument, the voice, inside us. A circle is here completed: what we hear is inwardly accompanied by our singing or speaking and thereby becomes audible to us once more.




The wonderful construction of the ear is thus experienced through the marvel of speaking and hearing. And hereby the whole social environment in which we live is brought together in us.

## *The Hearing Process as a Social Process*

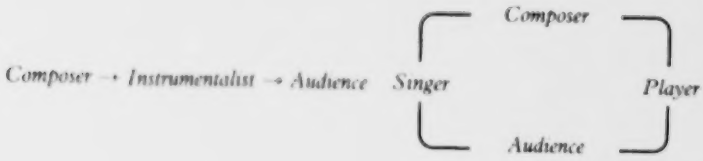
The larynx and it surrounding parts all belong to the organ of hearing. We hear a word, we hear a note. This word and this note not only confront us outside in space, but are simultaneously accompanied by us in speaking and singing. What is heard outwardly as sound--movement is experienced by us as an archetypal movement in our organic instrument, our voice. That which is audible, the part which resounds, is immediately broken off and reflected when it enters the ear. To begin with it is combined with the air, but this soon falls away and becomes ineffective. The air is only the bearer of sound; the vibration becomes dematerialised, the sound loses its material basis. This sound is simultaneously accompanied by us inwardly. And by means of this accompaniment we make contact with the person who produced the sound, who sang. Through the meeting with this person by means of our accompaniment we experience and hear him.

We learn about this from a small child. He learns to hear by singing the tones and speaking the words. The words and tones are there and the child repeats them without understanding them. Understanding comes later, after it has developed its hearing on the basis of its own singing and speaking.

In order to be able to hear we need the other human being. For through hearing we make an imaginative picture of the person who is speaking or playing an instrument and we are able to hear by coming into contact with the periphery of our hearing apparatus (for inside our ear the dematerialisation is taking place). A circle is formed in which the person who is listening meets with the one who is singing in such a way that both have a vivid experience of sound, so that the one can say: the other person sings in me: and the other can say: I am being heard.

From this experience we start to understand another circle which has existed for thousands of years, but which has been broken through in the last 700 years. Nowadays we listen to concerts sitting on low chairs, while on the stage soloists play to us the wonderful music of famous composers. That was not always so. The names of composers have only been handed down to us since the 13th century. Before that time the relationship between the composer of the music, the player or singer and the audience was different, it formed a continuity. The process of hearing was so 'active' at that time that the members of the

audience could easily identify themselves with the musician, who was always both player and composer at the same time. And the fact that people today are longing to become identified again, to become active again in their capacity to hear, shows that the desire is there to close the gap in this circuit once more.




Improvisation, activation in forming 'groups', concerts lacking an audience, all are ways towards accomplishing this. What is most important of all, however, is to discover the knowledge of the living process of hearing and what belongs to it, the new tones and tone-qualities.

## *The Problem of Electronic Sound and the Overtone Sequence*

A truly human act of hearing only takes place if a direct social connection exists between the speaker or singer and the person who listens.

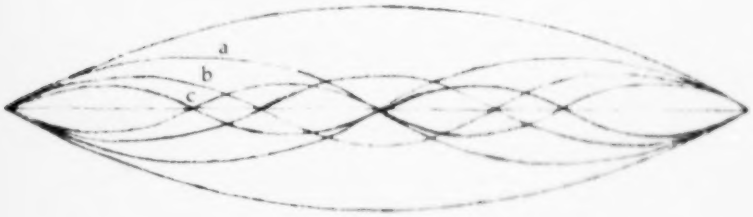
But the question still remains, what is it that takes place, or does not take place, when an electronic instrument is played? The player could be present, the afore-mentioned circle of composer, instrumentalist and audience could be intact, but the loudspeaker intervenes in it.

The question regarding electronic sound is still unsolved. Thus we cannot avoid delving deeper into the subject of sound perception from an acoustic point of view.

The usual acoustic descriptions of the process of our perception of sound are based upon the investigation by science of audible sound. These investigations consist of an analysis of the act of vibration in cases of all possible kinds of sound production. Always we come up against the phenomenon of partials, about which we spoke in the section concerned with how the tone becomes audible. We should like to complete this picture in a few words.

When the violinist touches the string with his bow the vibrations start at the exact spot where the bow hairs force the string to abandon its inertia. It has already been indicated that a short while elapses before the whole string starts to vibrate, thereby making the keynote audible.

It is easy to see that, owing to the tension of the string, the tiniest and most minute vibrations spread immediately along the whole length of the string and are exactly divisible into this, or vice-versa: they occupy exactly one half (a), one third (b), a quarter (c), etc: of the whole length. Every vibration which is not exactly ½, ⅓, etc: would not fit in. The total length of the string forces, as it were, the part-lengths to comply. This mechanically required interaction between the vibration of the whole to the vibration of the part of the string is the cause of the series of the overtones as expressed in the natural law that the half length has double the number of vibrations, a third has three times and a fourth four times the number of vibrations per second of the whole string. This sequence of partials is called the overtone sequence.




Much could be enlarged upon here. The phenomenon of the relationship of whole figures to one another reveals much about the acoustic secrets of matter and space. A further discussion on this subject would overstep the intentions of this article.

Acoustic investigations are able to explain in this way how it is not only the keynote, the deepest note produced by a string (or column of air), which becomes audible, but the partials make themselves heard too: the whole series joins in on this; octave, fifth, third and many other intervals become audible in the process.

With this basic phenomenon which always occurs when earthly matter vibrates, we touch upon the cause of a misunderstanding

which has almost eradicably set its seal upon our comprehension of the human perception of sound. How does the matter then stand?

The number of vibrations can be measured. All measuring will always point exactly to the quantitative value and will never miss a single number. Measurement cannot take place in any other way. Thereby it enables us to register the strength of the various numbers of vibrations. For instance, the keynote may sound louder than the various partials (or it may not!). But there is one thing which cannot be counted at all: the way that our ear transforms these numbers. Certainly we can achieve much by measuring. We have even been able to measure the exact spot in the cochlea where certain vibration figures are registered. But the moment always comes when the hearer, so to say, interprets the tone psychically, that is, experiences it. The actual moment of perception comes about; measuring plays no part in that! That is where the great misunderstanding arises.

We possess a selective hearing. We are able to train ourselves to pick out certain tones from a chord. They thereby become clearer and more distinguishable to us. We can concentrate on the partials which are always present physically. We can practise listening to the overtones. But – a natural healthy sense of hearing apprehends things differently!

What we perceive when a note is sounded can only be described in short here. Everyone can follow this up for himself. We are not dealing here with selective training, of course. On the contrary: We should as far as possible immerse ourselves dispassionately in the sound. We then hear (most easily when the note is dying away) the so-called keynote, for instance the note 'd'. But then we hear still another 'note', which, to be sure, does not present a clear pitch in the 'ordinary' way – in our example it would be 'd' – but which adds to it a strong quality. Like a murmur or whispering noise, which is anything but a chaotic sound (as the usual kind of noises always are) and which unites with the original keynote in a wonderful way. A qualitative experience runs parallel with what is thus perceived: the keynote 'd', as the deepest note, has a decidedly dark quality about it, but warm; the high-pitched 'murmur' has a distinctly light quality. *Warmth* and *light* are the two factors which we perceive inwardly, as it were entwined together in the moment when the physical vibrations of the note are dismantled, discarded within the ear. Two wonderful qualities which are heard together, but differentiate themselves from each other. But in this sounding together they only manifest their 'opposi-

tion' as a double quality which is experienced as a unity.

Of course our selective hearing can also be further 'trained' here too. Then the so-called warmth-tone does not show itself any more as warmth, but the 'd' becomes hollow, bare, empty. The so-called light-tone sounds only sharp and nasal. And further analysis reveals this light-tone in its physical form: a unified combination of all the overtones. And through that we discover the connection between certain specified overtone combinations and the timbre of a particular instrument. With a flute, other combinations are produced than with an oboe or a violin. We are thoroughly familiar with that through the making of musical instruments. But it is just this which shows us that a 'trained analysis' of this kind is of no further use to us when we endeavour to make a new kind of instrument which is intended to produce inwardly perceived tones. For its precise qualities are only discovered if we know the warmth and light factors of the physical materials. We are not able to conjure particular tone qualities into a new musical instrument merely through our knowledge of the overtones; we shall only succeed in this if we have the kind of knowledge which we can acquire by paying heed to the material substance and the form through which a perception of warmth-tones and light-tones is conveyed.

## *The Illusion of the Loudspeaker*

The hearing process can be summarised as follows: The musical instrument, as also the human voice, makes the tone audible by means of vibrations which combine with the resonant qualities of the instrument or voice to form a vibration-complex which is embodied by the surrounding air. Warmth and light elements created by the sounding instrument are carried by air vibrations. The human ear transforms and reflects the physical vibrations in such a way that at the point where the tone becomes inaudible within the ear the sounding qualities of warmth and light are simultaneously reproduced and recognised inwardly by the voice. That is what we call hearing.

The loudspeaker is quite different. The cone, which looks like a wind instrument, but consists only of cardboard, in contra-distinction to the musical instrument can only produce partials, overtones. It is unable to create a distinction between the high-pitched light-tone connected with matter and the dark warm keynote connected with

form, because the notes it produces do not arise out of a combined working of the material (wood, metal) and the form, but only consist of individual numbers of vibrations. Through that the keynote is exactly like all the other notes. Our ear is certainly reminded of many sound experiences and explains the electronically produced note from this aspect of memory: the illusion of the experience of a note is produced without the actual creation of tone as a phenomenon of polarity being present or being able to be present. And, added to that, there is usually the absence of the singer or instrumentalist.

Nothing can remedy this state of affairs. No 'hi-fi', no 'compact disc', no further technical proceedings can give 'soul' to a loudspeaker, which would make it sensitive to tone-warmth and tone-light. For this reason electronics can only have a devastating effect in a pedagogical setting.

One can, of course, ask how it has been possible for millions upon millions of people to regard these tones as genuine musical tones. We can easily understand that many people will not accept the view put forward here! We shall have remarks such as those quoted at the beginning of this article. *The electronic tones isolate people*. Naturally there is a certain justification for the use of electronic music in radio plays when, for instance, it is wished to portray space travel to other planets or stars. Immediately one feels isolated, enclosed within one's own space without a living social contact to others.

We discover cultural symptoms bearing a surprising similarity to those of an illness of modern times – autism. For a distorted hearing process provoked by electronic illusion presents us with a picture of autism.

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chronological age and have one class teacher throughout the lower school (Classes 1-8, 7-14 years). This teacher takes them for the main educational subjects for the first two hours each morning. Languages, handicrafts, singing, eurythmy, gym, games etc. are taught by specialists during the remainder of the school day.

In the upper school the main lessons are taken by subject specialists in 3-4 week blocks.

Children are educated in Waldorf Schools, world-wide from kindergarten to university level. *"Child and Man"*, the official journal for Waldorf (Steiner) education, is issued twice yearly and contains full details of Waldorf Schools throughout the world. *"Child and Man"*, obtainable from The Secretary, The Sprig, Ashdown Road, Forest Row, East Sussex, RH18 5BN, also from Rudolf Steiner bookshops and schools.

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# *Useful Addresses and Resources*

Rudolf Steiner School for Speech and Drama, The Secretariat, The Goetheanum, P.O. Box 134, CH.4143 Dornach, Switzerland. Telephone (061) 72 42 42

The London School of Speech Formation, Director, Maisie Jones, The Secretary, The Homestead, Dunnings Road, East Grinstead, West Sussex RH19 4NF Telephone (0342) 24384

## *U.S.A.*

Sophia Walsh, Teacher of Speech Formation, c/o Highland Hall School, Superior Street, Northridge, CA. 91325, and at The Goetheanum, Switzerland.

## *Australia*

The Harkness Studio, A Rudolf Steiner School for Speech & Drama, Raglan Street, Manley, (Sydney). N.S.W. 2095.

The above offer a three to four year training in Speech Formation, conferring a diploma in the Art.

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Waldorf Institute, 260 Hungry Hollow Road, Spring Valley, N.Y. 10977. Telephone (914) 425 0055

Rudolf Steiner College, 9200 Fair Oaks Boulevard, Fair Oaks, California 95628. Telephone (916) 961 8727

Iona Performing Arts Group, Artistic Directors: Merlyn Querido, Ruth Buck, Rudolf Steiner College, 9200 Fair Oaks Boulevard, Fair Oaks, California 95628 U.S.A.

The Actor's Ensemble, Ted Pugh, 200 Hungry Hollow Road, Spring Valley, N.Y. 10977.

Chrysalis Theatre Acting School, Leaders – Peter and Barbara Bridgemont, 12 Balham Park Road, Balham Park, London, SW12 8DR. Telephone 01 673 4881

Enquiries regarding Speech Artists in the United Kingdom to Rudolf Steiner House, 35 Park Road, London, NW1 6XT. Telephone 01 723 4400: 8219

For list of recognised training centres for Speech Formation world-wide, write to the Secretariat, The Goetheanum, P.O. Box 134, CH4143 Dornach, Switzerland.

Contact for Cosmic artistic work with the Zodiac in the United Kingdom: Mrs Fiona Tweedale, 'Silver Trees' 17 The Park, Plox Brow, Tarlington, Preston, Lancs. PR4 6HB. Telephone (0772) 813918

The College of Speech Therapists, Harold Poster House, 6 Lechmere Road, London, NW2 3BU. Local enquiries for assistance and information to your Borough Council in the U.K.

The Listening Centre (Tomatis Method), 99 Crowns Lane 4th Floor, Toronto, Ontario, Canada M5R 3P4. Telephone 416 922 1170

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